

Frontier Analysis, Ltd

TECHNICAL SERVICE RESPONSE NO.: UT019

Subject: Analysis of a Black Material From the Nose of a Possible Abductee
(August 31 – September 1, 2000)

Date: March 7, 2001

Requested By: W. L. Levengood
Pinelandia Biophysical Lab.

Reported By: P. A. Budinger
Analytical Scientist

Background/Objective: The sample is from a young lady¹ who has had a history of unusual and bizarre experiences involving strange entities. One strange event occurred overnight, August 31 – September 1, 2000, which resulted in a possible physical trace sample. The object is to identify the sample. Following is an excerpt from a letter accompanying the sample explaining the background behind the sample.

“With no school on Friday, September, (she) was allowed to be outside the home Thursday night until her normal weekend curfew of 12:30 AM. (The parents) ... retired shortly before 11 pm and had to (their) knowledge, an undisturbed, restful night.

(She) arrived home at 12:25 AM to discover a utility truck in front of (the) home. The motion-detecting light above (the) driveway did not turn on as expected. She walked over and spoke briefly with the utility worker, who confirmed that the power was out. [There has been no storm that day or night.] (She) then proceeded inside. Trying a light switch with no success, she found a candle and proceeded to her bathroom.

Minutes later, as she stepped back into the hallway near (the parents) closed bedroom door, she heard a succession of four beeps repeated a few times, with a several-second pause between each sequence. She believed the beeps were coming from (the parents) bedroom, which was in front of her and to the right beyond (the) closed door. [This might well have been in actuality the utility truck backing up repeatedly, though that would make the source of the sounds behind her some 40 feet and to the right.] She also heard the sounds of (the parents) moving on the (the) bed as if restless, and she assumed (they) were getting up. With that, she proceeded downstairs to her bedroom, candle in hand.

Friday morning (she) awoke about 11 AM and came upstairs to the bathroom. She immediately noticed a black smudge on her finger where she had rubbed her nose. Inspecting her nose closely, she discovered that both nostrils were caked with a black powdery substance. In that

¹ All indications of individuals involved in this event are deleted from this report to preserve confidentiality.

(her mother) had already left for our cottage, (She) phoned (the father) at his workplace to tell him. He instructed her to use Q-tips to remove the material and place them in a sandwich bag, which she proceeded to do. (She) also commented on the phone that she had found a white powdery substance on the butt of her right palm, but before she could find something to wipe it on, the substance apparently fell off of its own accord.”

Conclusions:

- 1.) The foreign materials detected in the nose sample are primarily carbon, with small amounts of oxidized hydrocarbon and a long carbon chain carboxylic acid salt. The acid salt may be calcium and/or zinc stearate. A trace amount of inorganic sulfate may possibly be present.
- 2.) There is a high probability that, in part, some of the foreign components (carbon and oxidized hydrocarbon) come from the candle. Fireplace soot as a source is ruled out because of the absence of substances such as humates, etc. in the nose materials.
- 3.) A long carbon chain carboxylic acid salt (specifically indicated to be zinc stearate) has been found by this analyst in a sample related to a well-known abduction. This analysis is currently on going and has not been reported out yet. This may be a significant find if it is found in more samples from other abduction events.
- 4.) The use of Q-tip for sampling is not recommended for this analysis. Cotton and polymer from the sides of the Q-tip tend to both mask the foreign components as well as introduce difficulty in isolating the material from the Q-tip.

Procedure:

Sample:

- KS-05-36 - Nose material from possible abductee received on a Q-tip in a plastic bag.

References:

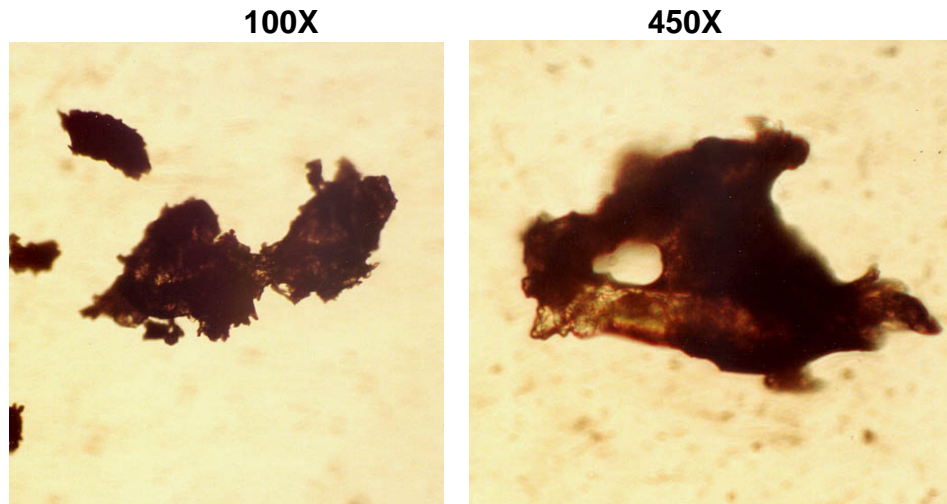
- Burned candle wick received in a plastic bag submitted with the sample.
- Soot from a fireplace received on a Q-tip in a plastic bag submitted with the sample
- Candle soot was collected about 5 to 6 inches above a “sooty” candle on aluminum foil by this analyst.

Several infrared spectra were obtained from the nose material on the Nicolet Avatar 360 spectrometer using the SplitPea® sampling accessory. Spectra were

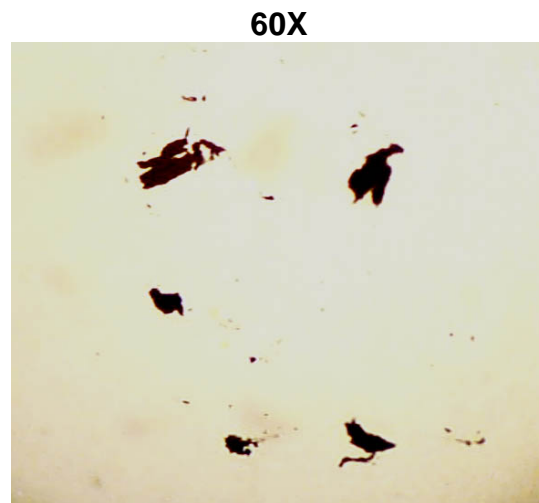
also obtained of the reference candle wick, soot collected from above a candle flame, and fireplace soot.

Results:

Microscope photographs of the black nose particulates were obtained by Dr. Levensgood. Two photographs follow. The first was taken at 100X magnification, and the second obtained at 450X magnification.



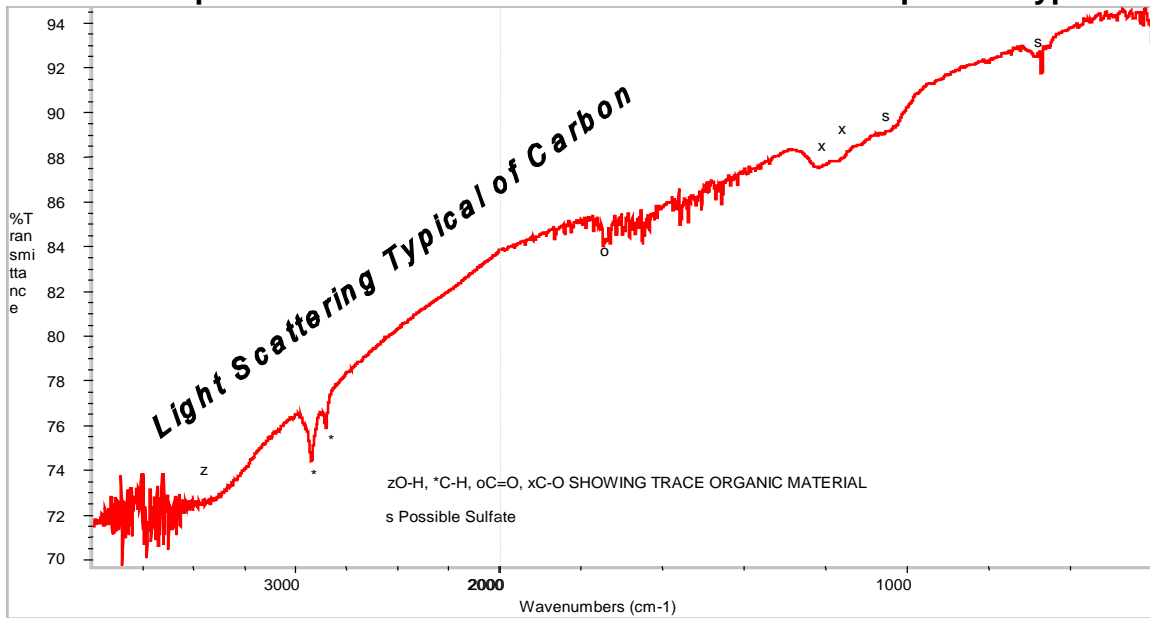
A microscope photograph taken by this laboratory of a reference of candle soot is very similar to the black nose particulates. The following photograph was obtained by this laboratory at 60X magnification.



Infrared spectra of the nose material varies, showing the sample is an inhomogeneous mixture of materials. Two different types of spectra were generated. One spectral type was obtained from well isolated, black

particulates². The spectrum displays light scattering at higher frequencies, which is very characteristic of carbon. (Carbon has no discrete absorption band in the infrared but generates a characteristic light scattering.) A trace amount of organic matter is shown by C-H absorption. Bands due to C=O and C-O are also present. This is suggestive of oxidation products. Additionally, a trace amount of inorganic sulfate could be present, but this is not confirmed. The following spectrum is representative of the isolated black particles.

Infrared spectrum of Well Isolated Black Particulate of Spectral Type 1

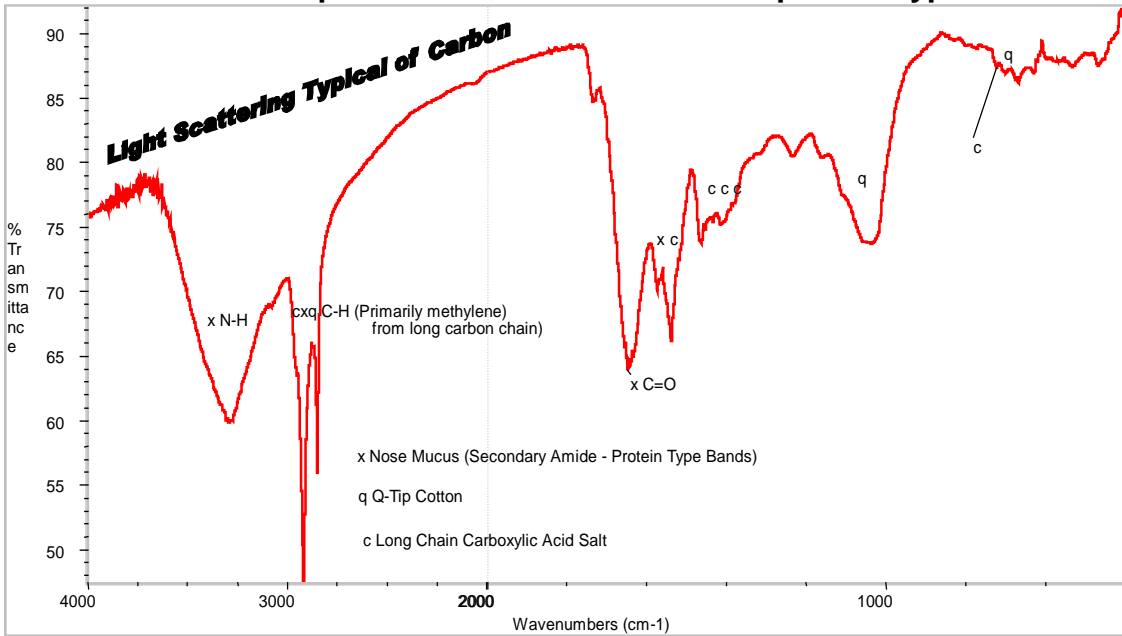


The second spectral type indicates contamination due to dried nose mucus, i.e. secondary protein amide type absorption predominates³. Additionally, residual cotton contamination from the Q-tip is detected. These materials interfere with pertinent absorption from the foreign nose material. However, some interesting observations could be made. These spectra also display light scattering, showing the presence of carbon. There is also additional absorption at 1574 cm^{-1} which appears to be due to a carboxylic acid salt. Two spectra have this band at different intensities. Therefore, a difference spectrum was generated between the two spectra. The result was enhancement of this band and resolution of additional bands. The carbon light scattering and nose mucus effects were nulled out. The additional bands are interpreted as belonging to a long carbon chain carboxylic acid salt, which, more specifically, could be calcium and/or zinc stearate. Following is a spectrum representative of the second set of similar spectra as well as the difference spectrum.

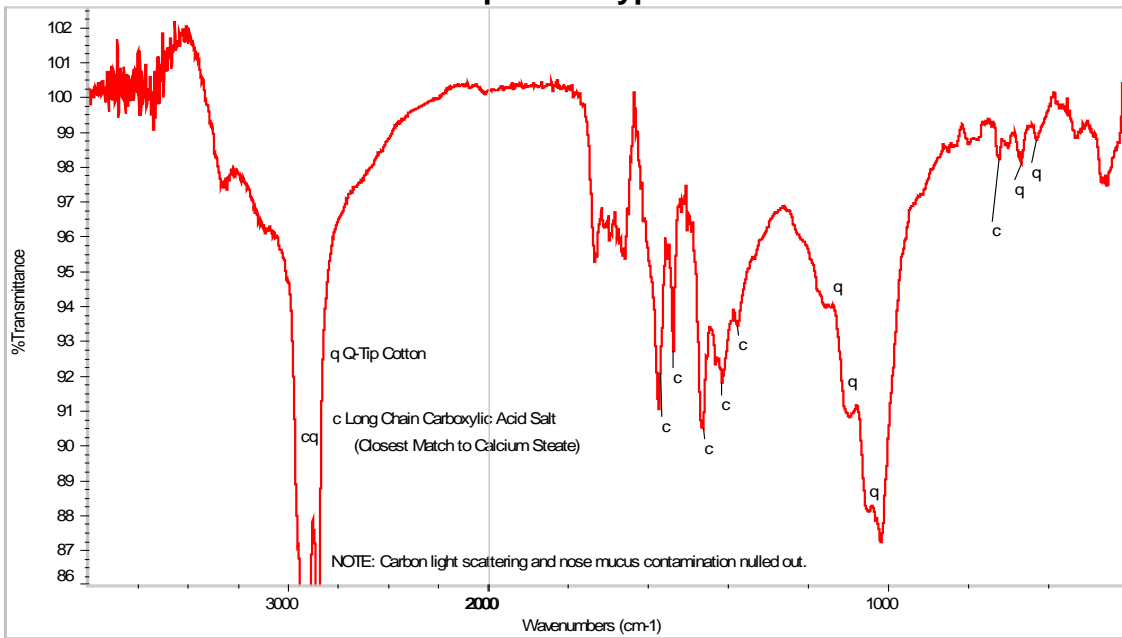
² Two spectra were obtained.

³ Two spectra were obtained.

Infrared Spectrum of Black Material of Spectral Type 2



Difference Infrared Spectrum Generated Between Two Spectra from Spectral Type 2

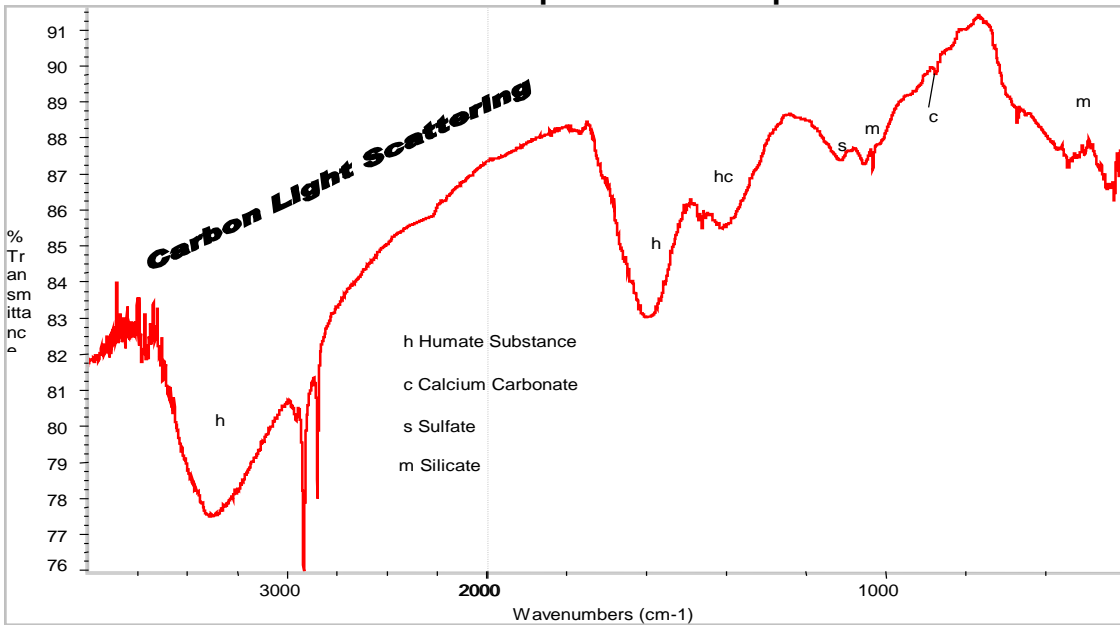


Spectra obtained from references of soot and candle wick were compared to the above materials in an attempt to correlate the source of the nose material.

The **fireplace soot** spectrum shows expected light scattering due to carbon, and moderate absorption which may belong to humate substance and possibly small amounts of calcium carbonate, sulfate and silicate. The absorption bands

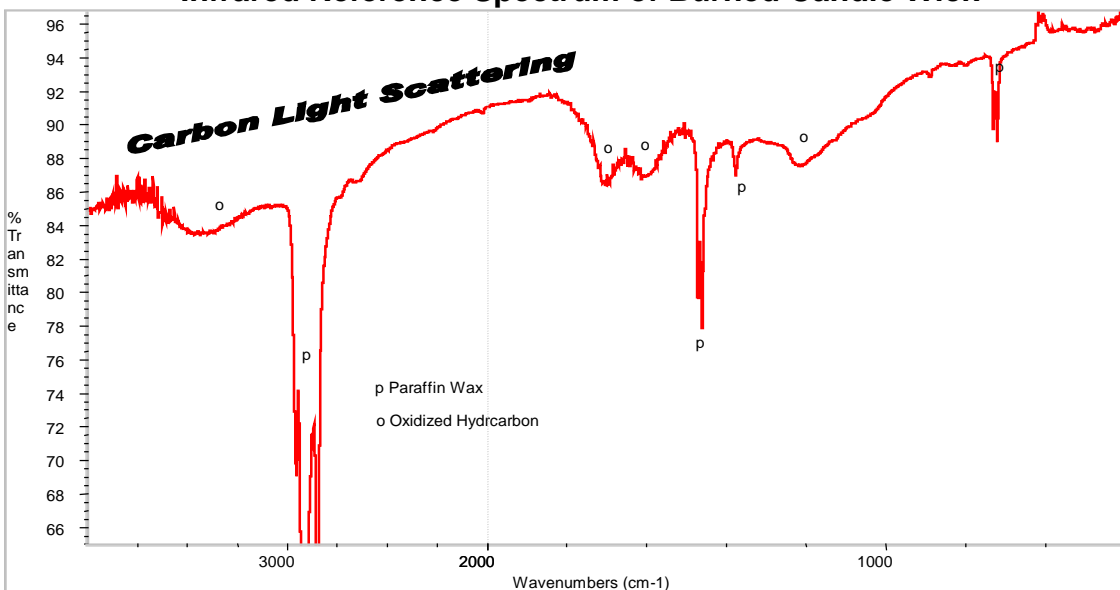
belonging to these speculated compounds are not apparent in the nose material, thereby ruling it out as a source. The soot spectrum follows.

Infrared Reference Spectrum of Fireplace Soot

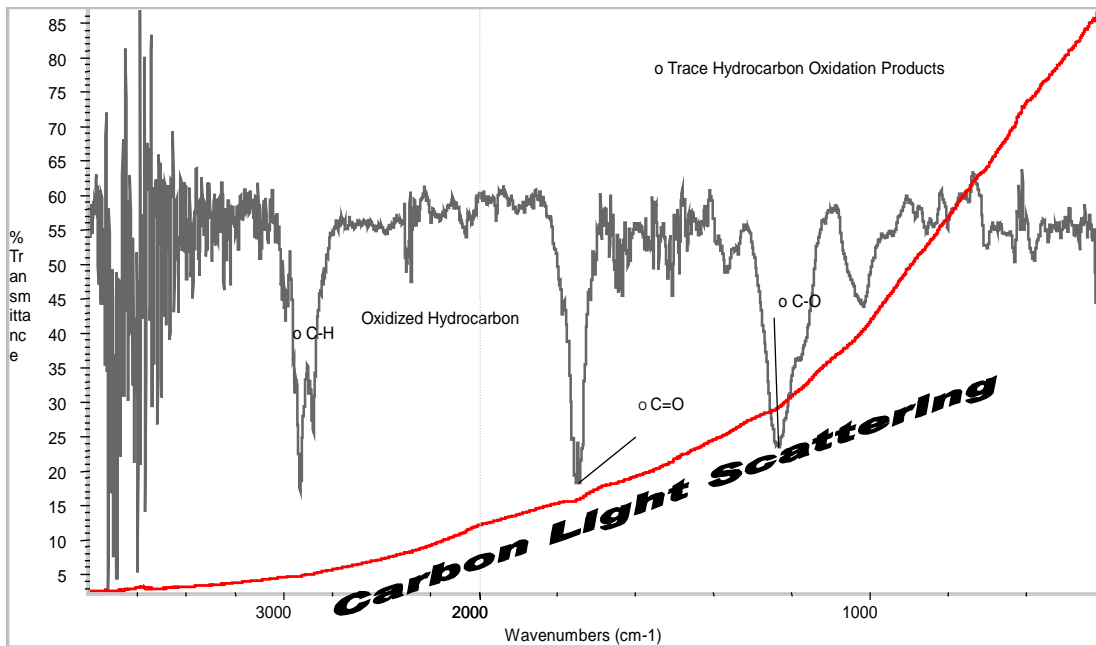


The **burned candle wick** spectrum also shows light scattering due to carbon. In addition, bands are present from paraffin wax (typical absorption due to crystalline long chain hydrocarbons with a chain length greater than 18 carbons). Additionally detected is oxidized hydrocarbon. No carboxylic acid salt is detected though stearate is known to be used in candle manufacture. Following is the wick spectrum.

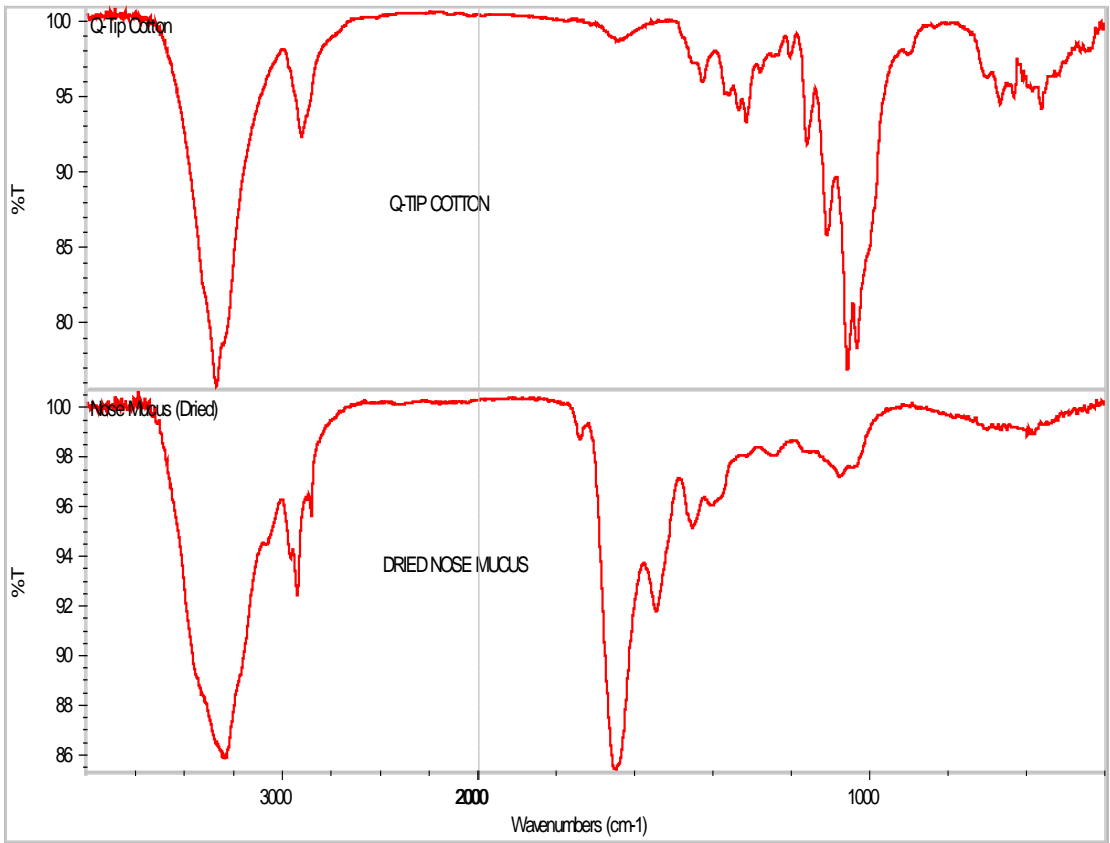
Infrared Reference Spectrum of Burned Candle Wick



A spectrum of **candle soot** is similar to that of the isolated black particulates found in the nose. Obviously, it shows considerable light scattering due to the prominent amount of carbon. A low trace amount of oxidation products similar to the nose particulates is also present. Following are two spectra. The red trace is the original spectrum of the candle soot. The black trace is the spectrum after the carbon light scattering has been removed by the computer, and it more clearly displays the oxidation products.



Finally, a Q-tip is not recommended for sampling in any future analysis, because it is difficult to isolate the foreign material from the cotton on the tip. The residual cotton on the material has absorption bands which interfere with those of the foreign materials. Following are reference spectra of Q-Tip cotton and dried nose mucus for comparison to the second spectral type of nose material in order to illustrate the problem.



File: TSRUT019.DOC

Phyllis A. Budinger