FTIR and Raman Proficiency Program

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Steven H. Hinrichs, M.D., Director, Nebraska Public Health Laboratory
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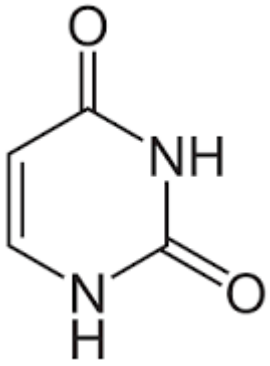
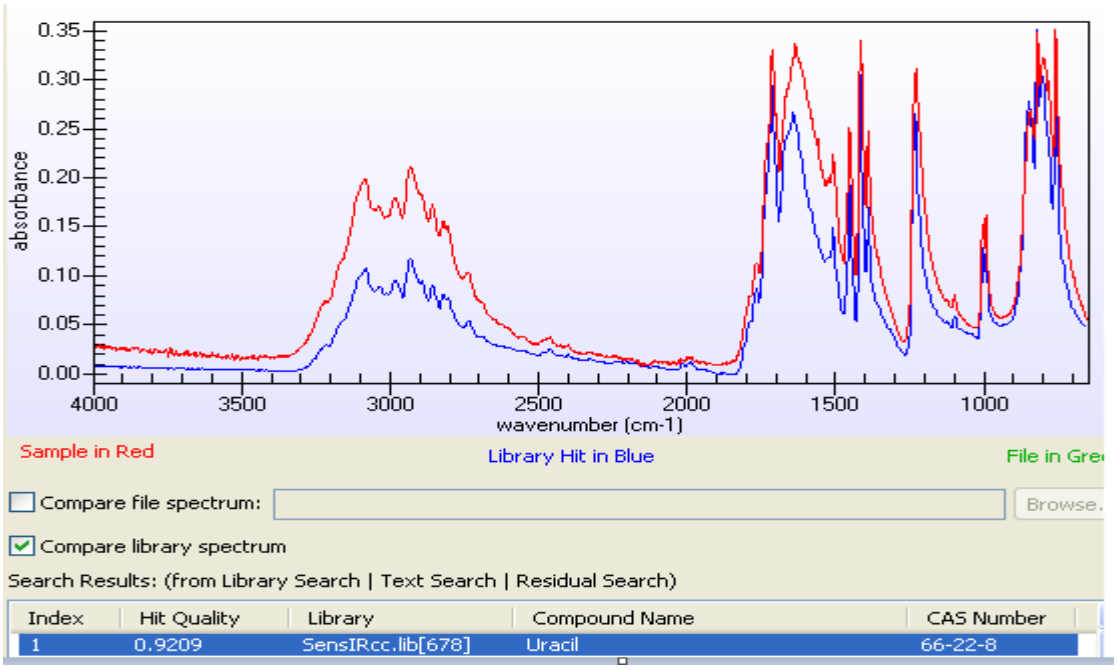
Summary Report for September 2017 FTIR Testing Event

The September 2017 FTIR testing event had one liquid and two powder samples. **FTIR17-7** was the RNA nucleobase uracil. This was a very fine, white powder.



This sample had a very good match on our instrument, with a hit quality of 0.9209 (0 – 1) from our common chemicals library. All participants correctly identified it.



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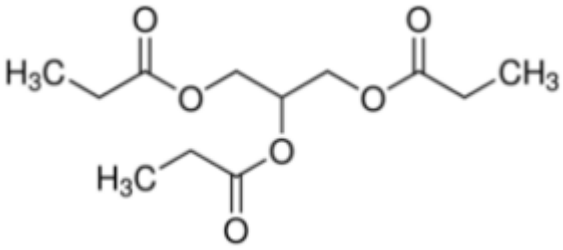
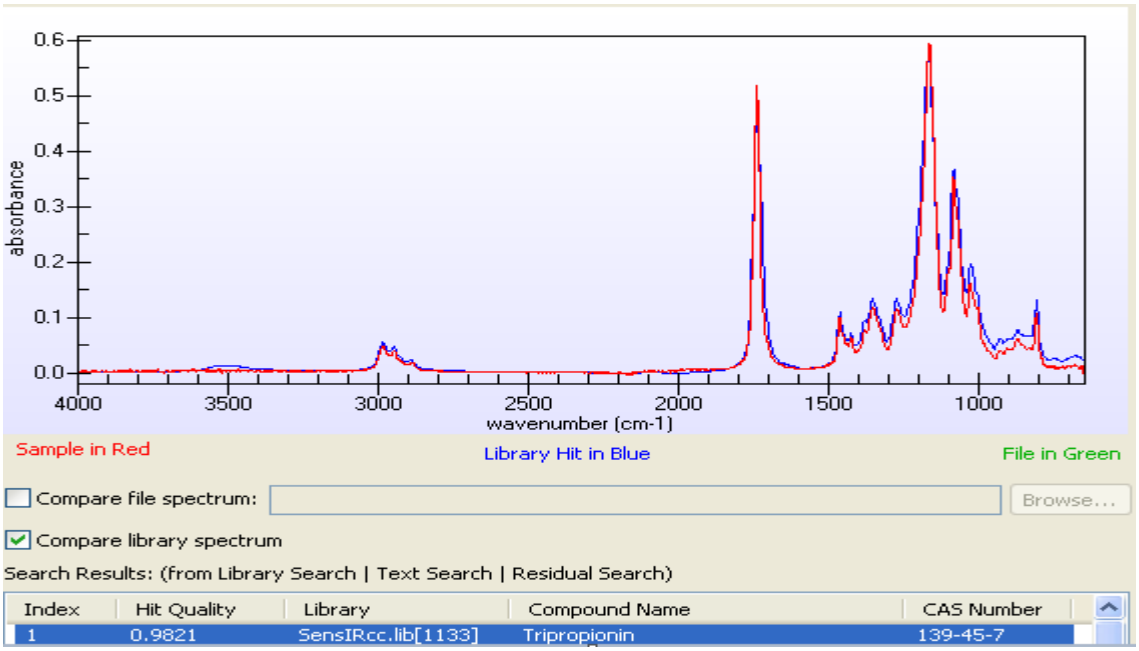
FTIR17-8 was a clear liquid that didn't have a strong odor, and was just slightly viscous. It was tripropionin, a chemical used as a food flavoring ingredient.



As with all liquids, we didn't have to engage the crushing function of the diamond tip objective and instead just made contact with the liquid sample. It gave a great spectrum and high quality match (0.9821, 0 – 1) from the common chemicals library. The majority of participants identified this.



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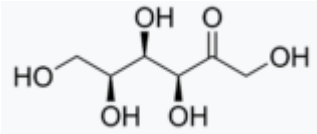
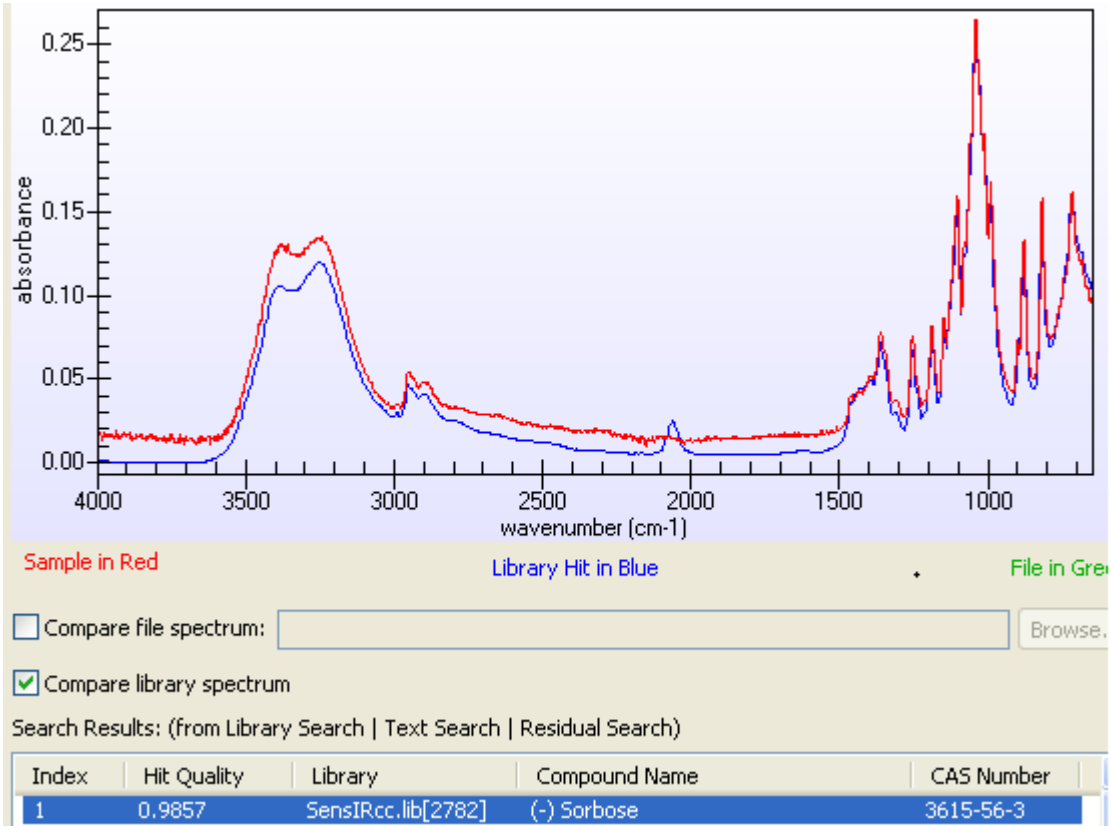
FTIR17-9 was sorbose. This was another white powder, and though fairly fine, it was shinier than the uracil. It is a monosaccharide and has a similar sweetness level to table sugar (sucrose). It is used in the commercial synthesis of vitamin C.



It, too, gave a very good spectrum and matched highly on our instrument with the common chemicals library. The majority of participants correctly identified this.



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Individual results can be found on the nphl.org website. Log in to the FTIR Program portal and enter facility ID. Click on the report for this event and a pdf file will be generated. This was the final FTIR event of the year and notifications for renewal in the program will be emailed out in October. As always, please contact us with any questions.

Regards,

David Moran, MT (ASCP)
Program Coordinator, FTIR Program
Nebraska Public Health Lab
University of Nebraska Medical Center

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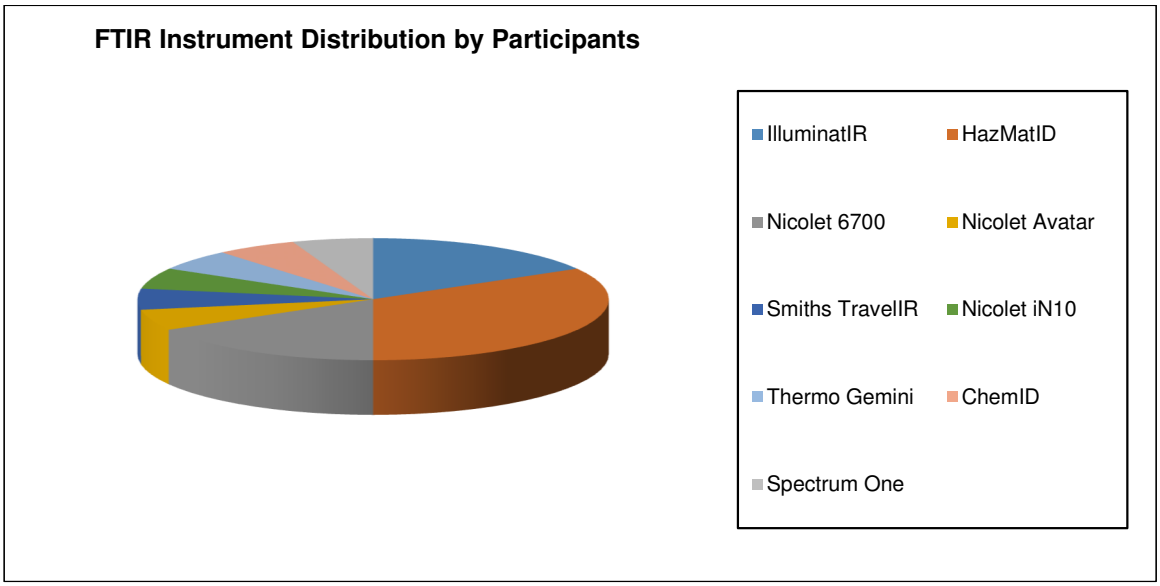

Event Performance:

A summary of results reported is shown in the following table:

PT ID	Compound	Match	Partial Match	No Match	Comments
FTIR17-7	Uracil	100%	-	-	
FTIR17-8	Tripropionin	78%	-	18%	Some reported No Result
FTIR17-9	Sorbose	89%	-	5%	Some reported No Result