

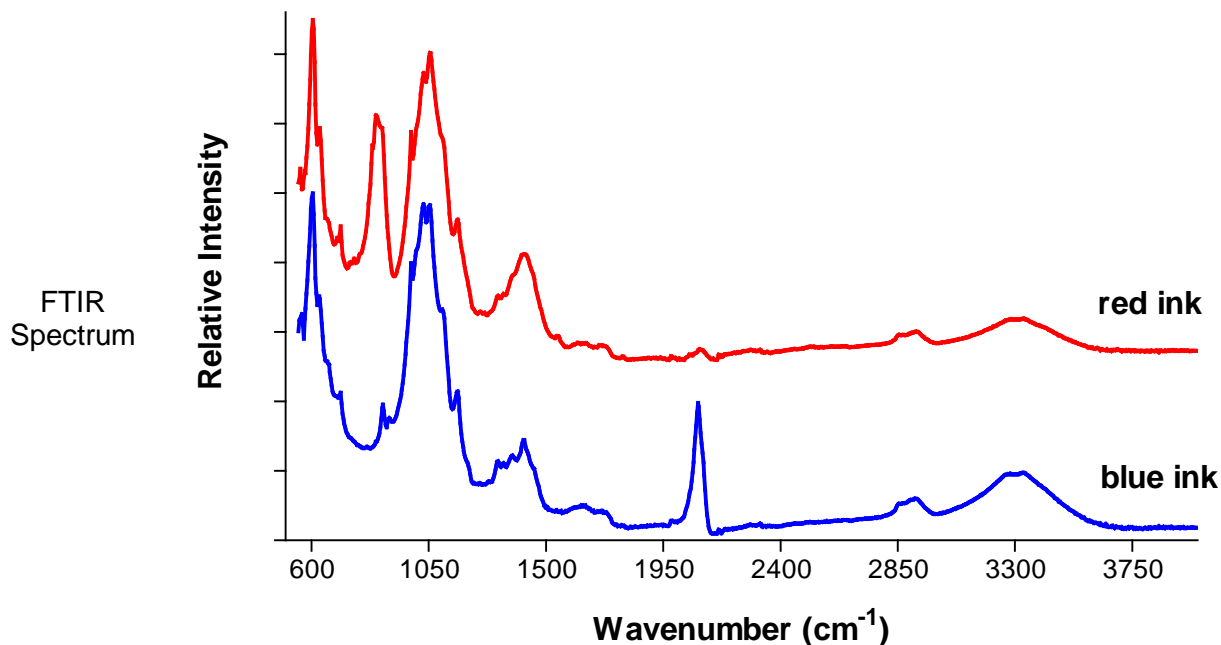
**Certificate of Analysis:**

**Certificate of Analysis, CPF-2020-04-02: (PSAG Cert Number 583186)**



*Harry G. Brittain*

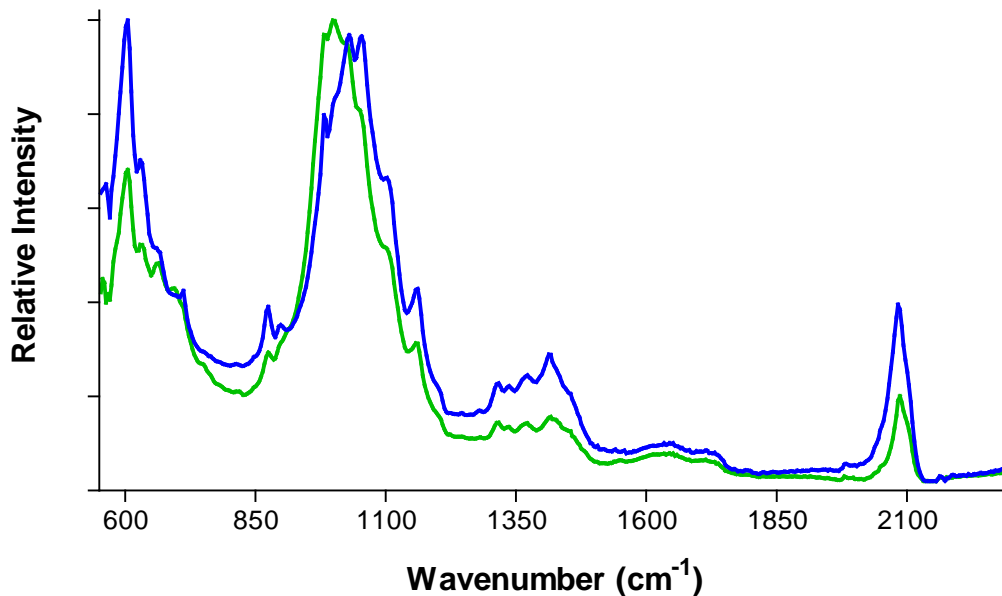
April 29, 2020



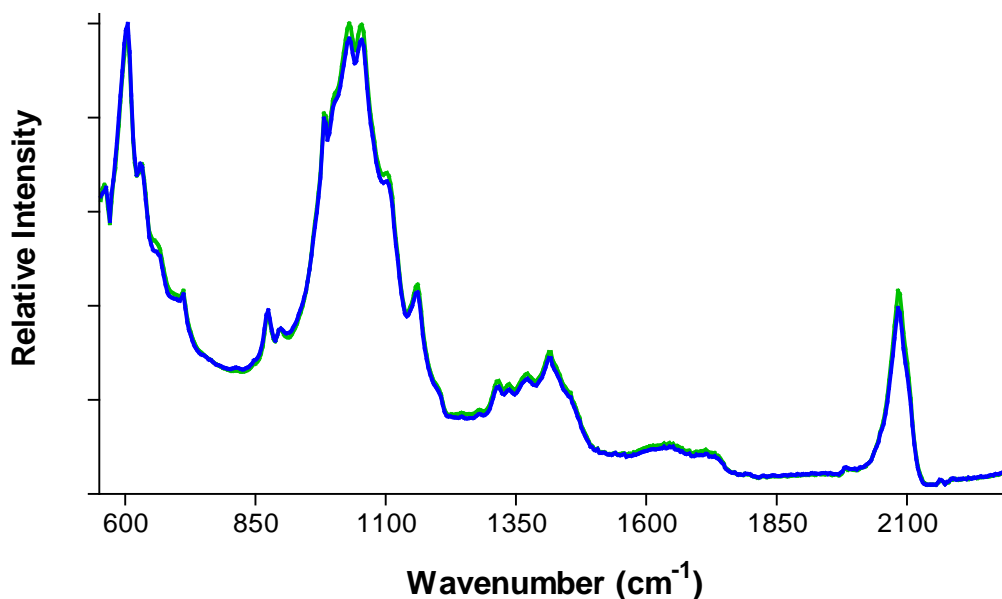
**Experimental Details:** Fourier-transform infrared absorption (FTIR) spectra were obtained at a resolution of 4 cm<sup>-1</sup> using a Shimadzu model 8400S spectrometer, with each spectrum being obtained as the average of 40 individual spectra. The data were acquired using the attenuated total reflectance (ATR) sampling mode, where the samples were clamped against the ZnSe/diamond crystal of a Pike MIRacle<sup>TM</sup> single reflection horizontal ATR sampling accessory. The intensity scale for all spectra was normalized so that the relative intensity of the most intense peak in the spectrum 100%.

**Conclusion:** As shown in the spectral overlays shown in the next two pages, the equivalence between the spectra of the PSAG Cert Number 583186 stamp and the reference spectra (both red and blue inks) demonstrates that the PSAG stamp is not a Scott-C23c, but is instead the more common C23.

- (1) Evaluation of the FTIR spectra associated with the blue inked region of the PSAG Cert Number 583186 stamp with those of reference FTIR spectra. Only the fingerprint regions have been shown so as to facilitate the comparisons.

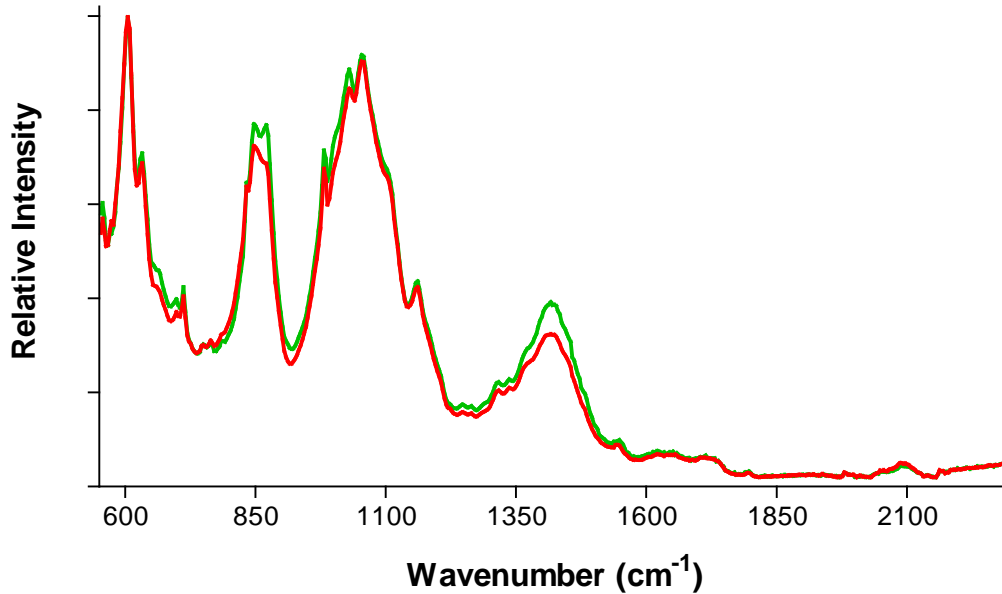


Blue trace: FTIR spectrum of the blue inked region of the PSAG Cert Number 583186 stamp.  
Green trace: FTIR spectrum of the blue inked region from the **C23c** reference spectrum.

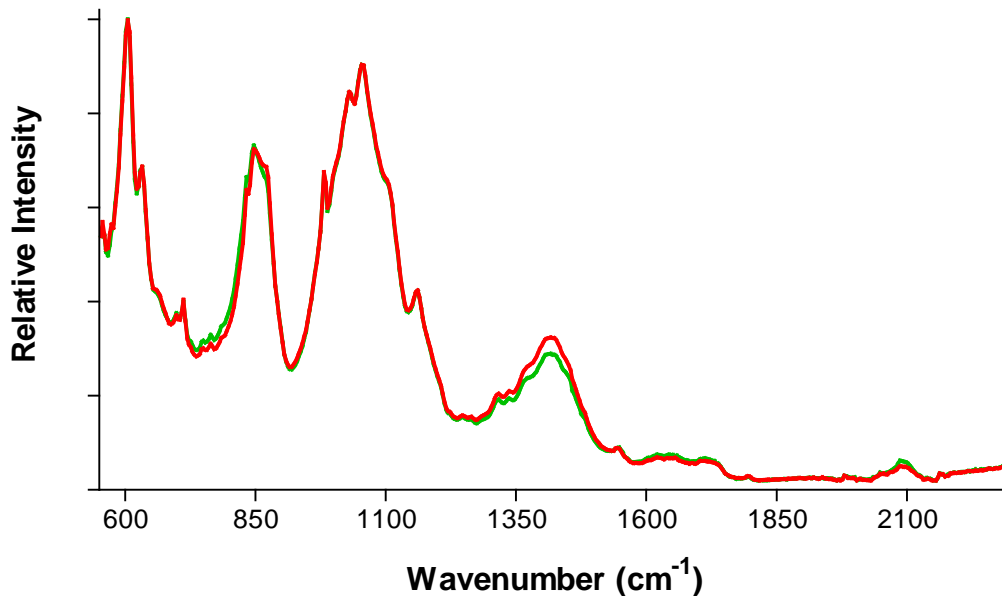


Blue trace: FTIR spectrum of the blue inked region of the PSAG Cert Number 583186 stamp.  
Green trace: FTIR spectrum of the blue inked region from the **C23** reference spectrum.

- (2) Evaluation of the FTIR spectra associated with the red inked region of the PSAG Cert Number 583186 stamp with those of reference FTIR spectra. Only the fingerprint regions have been shown so as to facilitate the comparisons.



Red trace: FTIR spectrum of the blue inked region of the PSAG Cert Number 583186 stamp.  
Green trace: FTIR spectrum of the blue inked region from the **C23c** reference spectrum.



Red trace: FTIR spectrum of the blue inked region of the PSAG Cert Number 583186 stamp.  
Green trace: FTIR spectrum of the blue inked region from the **C23** reference spectrum.