



Questioned Documents Section – 2011

J19 The Current Status and Future of Ink Dating Methods

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After attending this presentation, attendees will gain greater understanding about ink dating methods and be updated on the current status.

This presentation will impact the forensic science community by providing a comprehensive retrospective on ink dating and a look toward its future.

Requests to determine the age of a writing ink used on a document are frequently encountered by forensic document examiners. Dr. Antonio Cantu formerly outlined two analytical approaches for determining the age of an ink on a questioned document: static and dynamic. The static approach to ink dating generally applies to methods that are based on comparisons with a standard reference collection of inks to determine the first date of production. The dynamic approach includes methods that incorporate procedures for the purpose of measuring the physical and/or chemical properties of an ink that change with time. The basic principle is that when ink is placed on a piece of paper, it undergoes an aging process due to evaporation of solvents and complex interactions that result from oxidation and polymerization of resins or other components. The changes that occur over a given period of time can generally be referred to as aging characteristics. Different approaches to measuring the age of an ink, once it has been placed on a document, have been discussed in the literature over the past two decades, but there still exists significant controversy about the accuracy, reliability, and validity of the dynamic procedures.

This presentation will provide an historical perspective of ink dating methods and an update regarding the current status. A synopsis of the research that has been published on this topic and a review of court rulings will be provided. Specifically, how these methods have fared when subjected to *Frye* and *Daubert* hearings will be highlighted. There is a very small number of forensic ink dating specialists worldwide, so attendees will benefit from a comprehensive retrospective on ink dating and a look toward its future.

Ink Dating, Ink Analysis, Ink Aging