

Rapid Determination of Cotinine in the Saliva of Non-Smokers

- **Background**

- Cotinine is a principle metabolite of nicotine, a signature component of environmental tobacco smoke.
- The presence of cotinine in the saliva of volunteer human subjects can be used to evaluate whether a subject is a true non-smoker or is, in fact, an occasional or regular smoker.
- Including data from occasional or regular smokers in a pool of nonsmoking human subjects leads to erroneous conclusions concerning the exposure of subjects to environmental tobacco smoke.

- **Method Requirements**

- Distinguish between subjects who are true nonsmokers compared to occasional or regular smokers. The “decision” concentration is usually 2 ng cotinine/mL saliva.
- Unambiguous identification of cotinine.
- Capable of processing samples quickly. The initial test batch consists of approximately 500 saliva samples.

- **Proposed Method**

- Rapid isolation of cotinine and removal of salivary proteins using an OASIS[®] HLB isolation column
- Injection of sample extracts using Nanomate[®] sampler into mass spectrometer source
- Identification of cotinine using a highly-specific mass transition
- Quantitation employing using d₃-cotinine and the method of internal standards.

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