Waters
Lab Highlights
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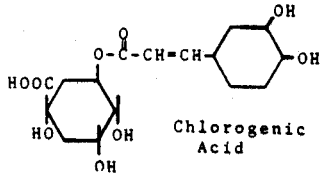
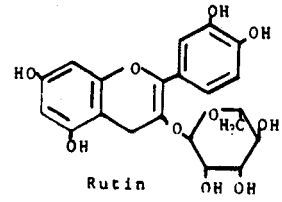
POLYPHENOLS IN PROCESSED TOBACCO

The phenolic components of tobacco are regarded as important indicators of tobacco leaf quality. Tobacco contains numerous polyphenols including caffetannins such as chlorogenic acid and flavanoids such as rutin. These polyphenols are important contributors to smoke flavor and aroma. However, they are also precursors of undesirable dihydroxybenzene compounds in smoke such as catechols and hydroxyquinones.

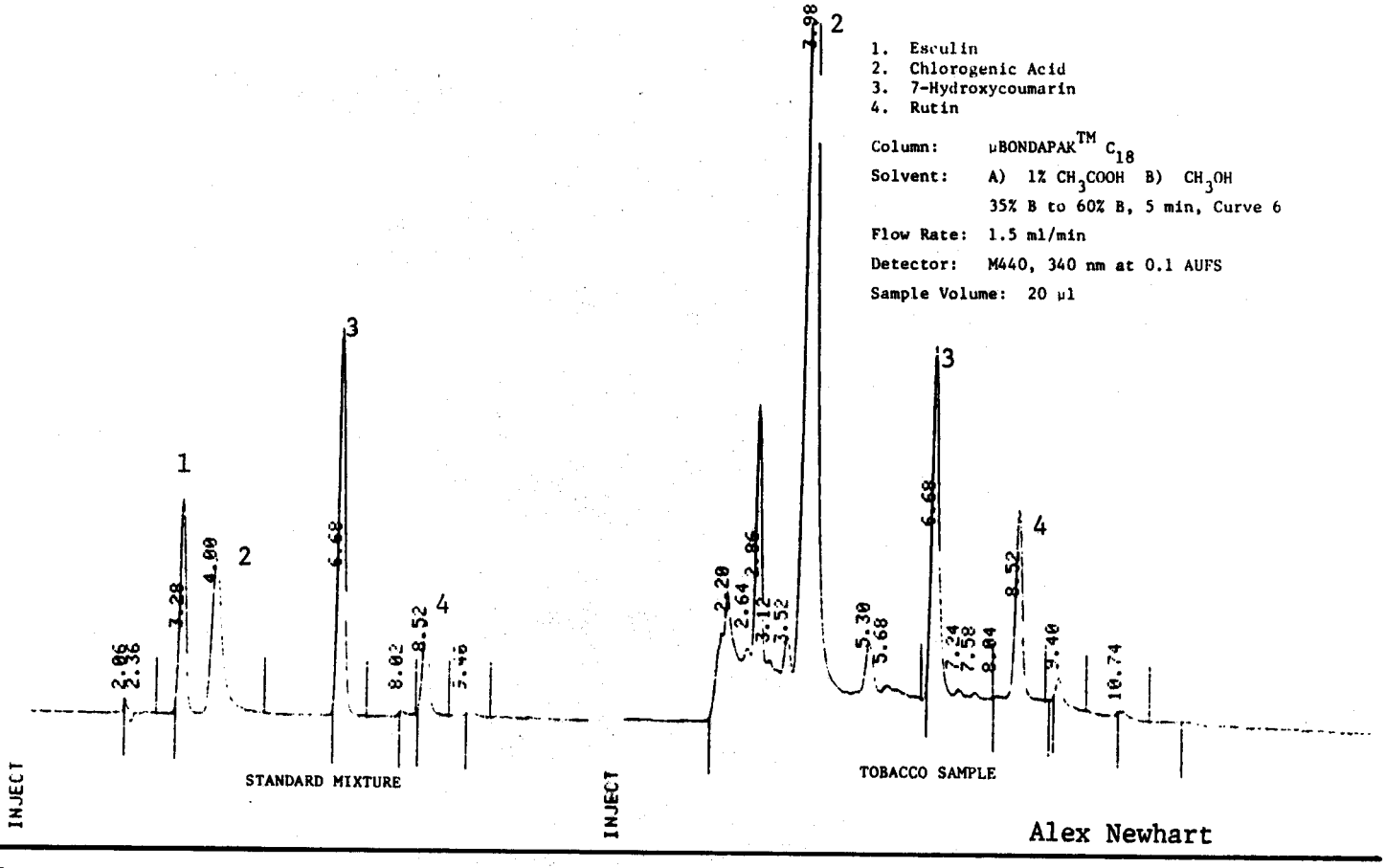


Chlorogenic Acid



Rutin

A rapid analytical method was developed for the analysis of polyphenols from processed tobacco samples. Twenty-five milligrams of tobacco was extracted with five milliliters of water containing an internal standard (7-hydroxycoumarin, .01 mg/ml). This mixture was ultrasonicated with occasional shaking for twenty minutes. The solution was then filtered through a 0.45 micron Millex® HA filter. Chromatograms of a standard mixture and an extract of a processed tobacco sample are presented below.



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