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**NITROGEN COMPONENTS OF LEAF  
AND  
THEIR RELATIONSHIP TO SMOKING QUALITY AND AROMA**

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for this will become apparent.

We shall now leave this brief discussion of the gross phytochemical and metabolic changes that occur in the leaf to discuss in somewhat more detail the role of nitrogenous substances in flavor quality and the rather complex chemical transformations that occur in leaf during aging, processing and the smoking process.

#### NICOTINE AND FLAVOR QUALITY

This review would be incomplete without mentioning the role that tobacco alkaloids play in smoking quality. However, since Nicotine represents the major component of this family and has been the subject of numerous publications, their role in smoking flavor will be touched on only by delineating the basic factors which are known to affect the flavor profile due to these substances.

It is assumed that Nicotine is one of the primary satisfaction factors for which tobacco products are used. However, in air-cured tobaccos (e.g. cigar, Burley, Maryland) the pH of the smoke is generally alkaline and the flavor effect of nicotine is a "harshness" which can be choking and unpleasant. In the case of tobaccos containing sugars (e.g. Flue-cured, Oriental), the tobacco smoke is weakly acidic and the effect of nicotine is greatly modified and the harshness is dramatically reduced. This same effect is often achieved by the addition of sugars to air-cured tobaccos to "mellow" the smoke and/or by the blending of air-cured tobaccos with flue-cured and Oriental<sup>96</sup>. Thus, pH of the smoke and sugar content of the leaf are factors which play an important role in the nicotine strength perceived in the smoking process. But nicotine alone does not determine smoking flavor, or acceptability, as has sometimes been suggested by individuals unfamiliar with the flavor of various tobacco types.

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