

Isolation and Characterization of High Molecular Weight Coffee Melanoidins

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SUMMARY

High Mw melanoidins populations from coffee brew were separated based on charge and ethanol solubility. It was found that the obtained populations differed in their composition and color. All fractions contained nitrogen and only 83% of the total nitrogen content was found to be originating from amino acids, and the remainder (17%) of the nitrogen is likely to be part of melanoidins. A correlation between the protein content and the melanoidin content was found which allowed us to conclude that proteins (fragments) are probably part of the melanoidin complex. Another aspect was that melanoidins possess a negative charge as shown by anion-exchange chromatography, although quite some distinction could be made in the anionic character of different melanoidin populations.