



## Determination of the Sibutramine Content of Dietary Supplements Using LC-ESI-MS/MS

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**SUMMARY.** Obesity is recognized as a public health problem throughout the world. Dietary supplements have been used as alternative treatments for obesity, and many of these supplements allegedly contain “natural products”. This paper describes the development of an LC-MS/MS method for the analysis of sibutramine, which is an adulterant found in dietary supplements. The samples were prepared using a simple extraction process, and the analytical run time was approximately 10 minutes. A reverse-phase column was used to resolve the contents of the supplements, and gradient elution using acetonitrile and water (1:1, V/V) acidified with 0.1% formic acid was performed at a flow rate of 0.4 mL/min. The identification of the relevant compounds was performed using multiple reaction monitoring (MRM) ratios in positive ionization mode. The method described in this work was validated, and our analysis indicates that this method is accurate, precise, easily performed and sensitive. The limit of quantification was 4.0 ng/mL, and the limit of detection was 1.3 ng/mL. The linear range for the data was 5.0-30.0 ng/mL, and in this range, the correlation coefficient (*r*) calculated by the least squares method was 0.99848. The proposed method can be used for routine analysis.

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**KEY WORDS:** Adulterant, Dietary supplement, LC-MS/MS, Sibutramine.

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