



Comparison of Three Methods for Quantification of L-alanyl-L-glutamine

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SUMMARY. Three novel and simple (two spectrophotometric and a HPLC) methods were developed and validated for determination of L-alanyl-L-glutamine peptide (AGP), that has been shown beneficial for many groups of patients with nutritional requirements and for glycemia recovery. The standard curves were linear, with coefficient of correlation of 0.9998, 0.9841, and 0.9999 for the direct, ninhydrin-based and HPLC methods, respectively. The residue analysis showed that the three methods had significant regression, but the ninhydrin-based method presented lack of fit and, for that, the linear model is not suitable. Direct and HPLC methods are suitable for determination of AGP, with precision, accuracy and specificity. Despite the specificity of the HPLC method, the direct method was more sensitive (limit of quantification of 0.0057 mg/mL) than the HPLC method (0.0097 mg/mL) and because of no organic solvent had been used with the direct method, it makes the method inexpensive and environmentally correct.

KEY WORDS: HPLC, L-alanyl-L-glutamine, Ninhydrin reaction, Spectrophotometry, Validation.

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