

عنوان مقاله:

Utilizing the NAG- FSX^3 - 3D analyzer at -180° degree coupling with continuous flow injection analysis to determine of loratadine in drugs by the precipitation method using sodium nitroprusside

محل انتشار:

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خلاصه مقاله:

In order to improve the sensitivity of the newly established methodology, a thorough examination was carried out on the essential parameter. A rapid and highly responsive technique has been developed for the detection of loratadine. This method involves the generation of pale white species through the reaction between sodium nitroprusside and loratadine. The transducer's energy response was evaluated using the NAG- FSX^3 - 3D analyzer. The linear range for measuring loratadine is $0.01-10$ mM (millimolar). For concentrations of 4 and 10 mM. The RSD (relative standard deviation) for six trials was significantly lower than 0.14 percent. The measurement of loratadine has a limit of detection (LOD) of 261.890 ng/sample for ($n=13$). The calibration graph shows a progressive dilution across the lowest concentration linear dynamic range, with a correlation coefficient (r) of 0.9984. The percentage linearity (R^2 %) is 99.68. The proposed approach was evaluated in comparison to the previous technique, which involved UV-spectrophotometric analysis at a wavelength of 275 nm. Based on the findings, it can be inferred that the technique exhibits enhanced sensitivity and surpasses the classic reference method's 10 mm irradiation, owing to its utilization of specific chemicals. Based on the aforementioned information, it is determined that the developed methodology is the most appropriate for analyzing loratadine in pharmaceutical samples when compared to the reference techniques

کلمات کلیدی:

Antihistamine, Flow Injection Analyzes, Loratadine, NAG FSX^3 , Sodium nitroprusside

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