

Using Raman Spectroscopy to Investigate Drugs with Similar Chemical Structures and Antagonistic Effects

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SUMMARY. This paper presents a Raman spectroscopy analysis of drugs with similar chemical structures and antagonistic effects. The research objects selected for analysis were folic acid, which has a vitamin effect, and its antagonist methotrexate; sulfanilamide derivative – streptocide; and p-aminobenzoic acid derivative – benzocaine. It was demonstrated that these drugs, which are identical in terms of physical and chemical properties, can be identified and distinguished from each other using the Raman spectroscopy method.

RESUMEN. Este artículo presenta un análisis de espectroscopía Raman de fármacos con estructuras químicas similares y efectos antagónicos. Los objetos de investigación seleccionados para el análisis fueron el ácido fólico, que tiene efecto vitamínico, y su antagonista metotrexato; derivado de sulfanilamida – estreptocida; y derivado del ácido p-aminobenzoico – benzocaína. Se demostró que estos fármacos, idénticos en cuanto a propiedades físicas y químicas, pueden identificarse y distinguirse entre sí mediante el método de espectroscopia Raman.

KEY WORDS: benzocaine; folic acid; methotrexate; Raman spectroscopy; streptocide.

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