In this study we compare spectroscopic properties of pemoline (2-amino-5-phenyl-2-oxazolin-4-one) and its acid hydrolysis product 5-phenyl-oxazolidine-2,4-dione. Crystallization of pemoline from aqueous acetic acid gave single crystals of compound 2, the structure of which was determined by X-ray studies. All four crystallographically independent molecules form dimers linked by N-H···O=O hydrogen bonds.

Key words: Pemoline, 2-Amino-5-phenyl-2-oxazolin-4-one, 5-Phenyl-oxazolidine-2,4-dione, Raman Spectra, X-Ray Structure