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Structure and conformations of stereoisomeric 1,5;2,3-bis-O-(N-diethylamidothionephosphato)- β -D-ribofuranosides from ^1H , ^{31}P , and ^{13}C NMR spectral data

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Abstract

1. The preferred conformations of the ribofuranose and 1,3,5,2-trioxaphosphepane rings in stereoisomeric 1,5;2,3-bis-O-(N-diethylamidothionephosphato)- β -D-ribofuranosides are the twisted envelope ${}^1\text{T}_0$ and the chair $\text{C}_5\text{CO}1\text{C}1$ conformations, respectively. 2. The conformations of the dioxaphospholane ring in the indicated compounds correspond to the twisted envelope $\text{P}_2\text{TO}2$ and $\text{O}_3\text{TP}2$ conformations, distinguished by the cis or trans orientations of the $\text{O}_2\text{P}_2\text{O}_3$ fragment relative to the H_2 and H_3 atoms of the ribofuranose ring. © 1981 Plenum Publishing Corporation.

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