A kinetics study of the activation energy for the desorption of water from guanosine

MEGAN SCHWENKER SMITH, SCOTT LEE, University of Toledo — The interactions of the nucleic acids with their water of hydration are of fundamental importance but are still poorly characterized. As an initial effort, we have studied the nucleoside guanosine (rG), composed of the ribose sugar and the guanine base, which is a component of RNA. We have measured the interactions of the water of primary hydration with rG via thermogravimetric measurements and differential thermal analysis by studying the kinetics of the dehydration process. These data yield the activation energy for the desorption of the water of primary hydration from rG.

Scott Lee
University of Toledo

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