Cardiotoxins from snake venoms produce a variety of toxic effects, e.g. depolarization of membranes, hemolysis and synergistic action with phospholipase A2. Relatively little is known about the mechanisms of action of cardiotoxins and additional insight might come from a knowledge of the spatial structures. We present work on the determination of the spatial structure of Cardiotoxin VII2 from N.moss.moss., following a strategy based on the use of 2-dimensional 1H NMR at 500 MHz as was recently described in detail (K. W@thrich, G. Wider, G. Wagner and W. Braun, J. Mol. Biol. 155, 311-319 (1982)). Nearly complete 1H NMR assignments will be described and the gross features of the conformation of toxin VII2 will be diuscussed.