

Enzymatic Crosslinking of a Nanofibrous Peptide Hydrogel

Erica L. Bakota, Lorenzo Aulisa, Kerstin M. Galler and Jeffrey D. Hartgerink*

Contributions from the Department of Chemistry and Department of Bioengineering
Rice University, 6100 Main Street, Mail Stop 60, Houston, Texas 77005

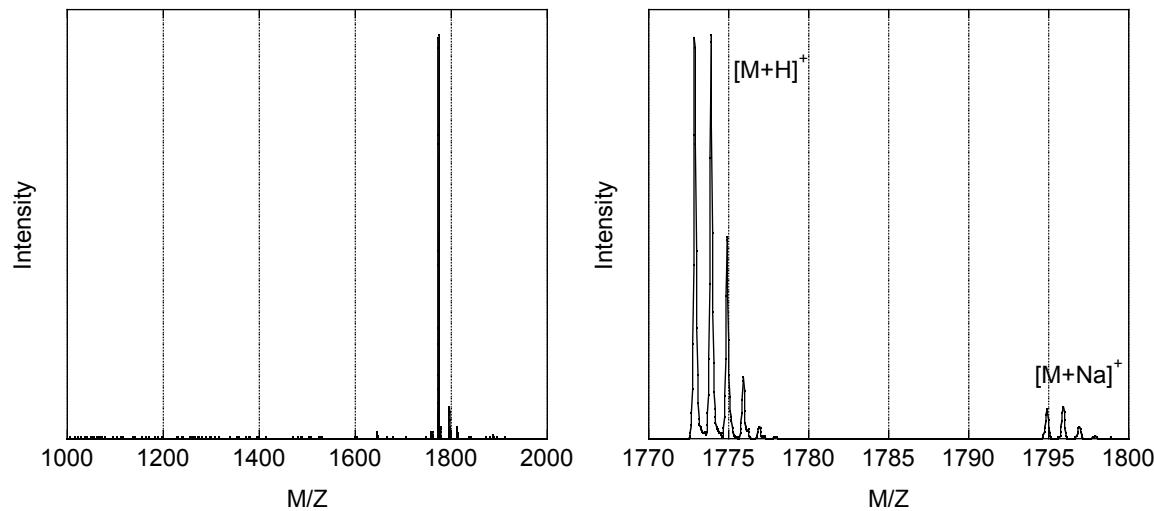


Figure S1. MDP 1, K₂(SL)₆K₂: [M+H]⁺ observed = 1772.8; calculated monoisotopic mass = 1772.1.

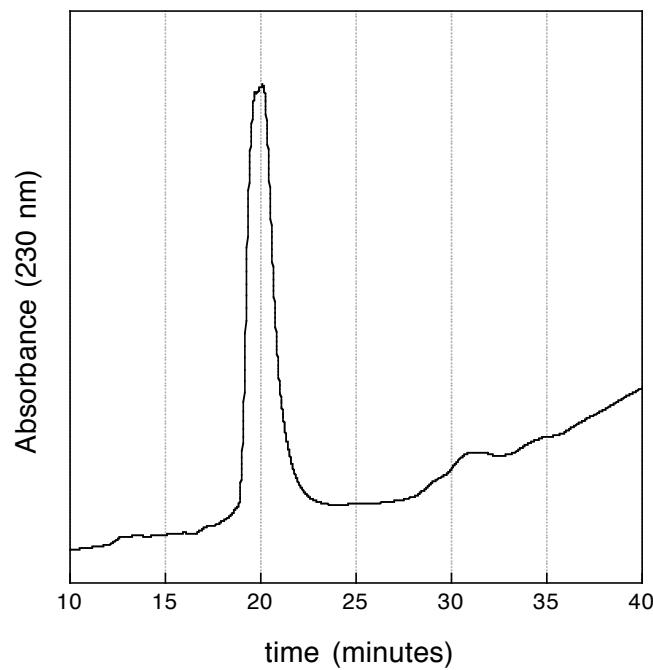


Figure S2. HPLC of MDP1, K₂(SL)₆K₂. Trace reveals the presence of effectively one peak. Peak asymmetry is attributed to the difficulty of performing HPLC on highly amphiphilic molecules. Reverse phase HPLC was performed using a C18 column and a mobile phase of water and acetonitrile with 0.1% trifluoroacetic acid by volume. A linear gradient with 3% / minute slope from water to acetonitrile was used.

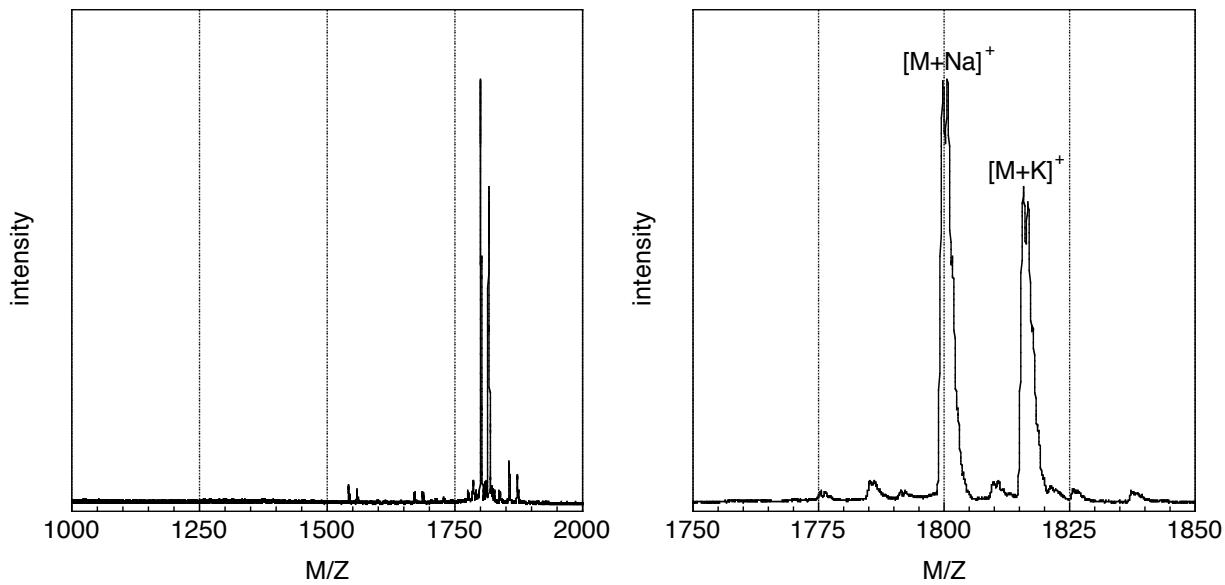


Figure S3. MDP 2, $E_2(SL)_6E_2$: $[M+Na^+]^+$ observed = 1799.6; calculated monoisotopic mass = 1798.9.

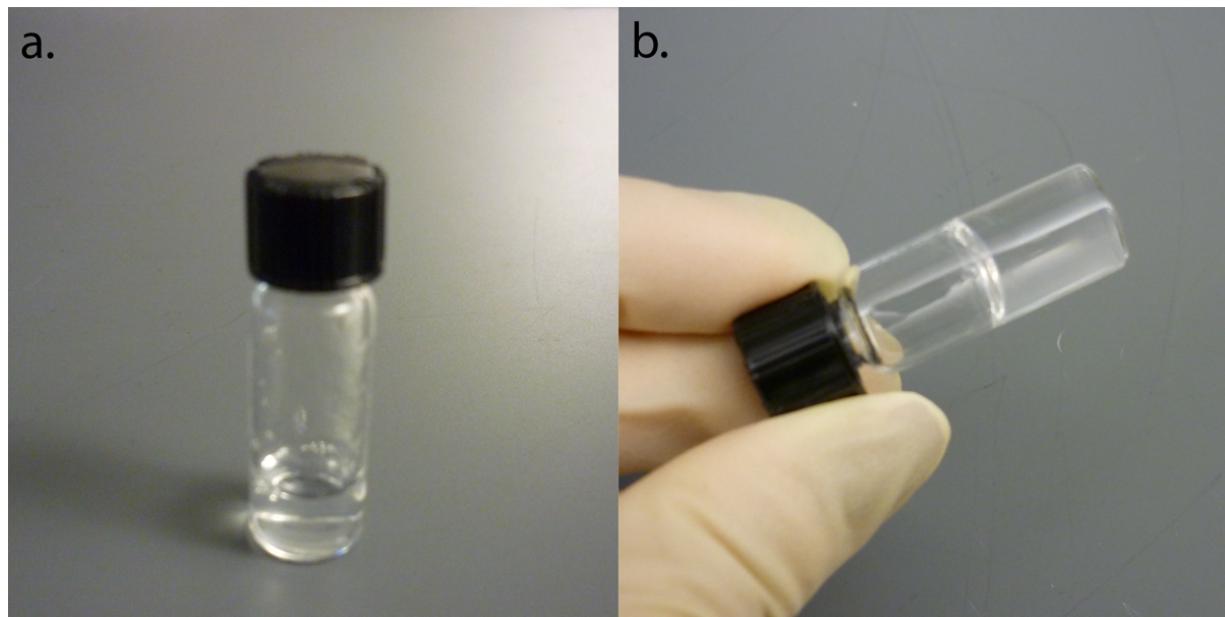


Figure S4. $K_2(SL)_6K_2$ hydrogel a) before PAO crosslinking and b) after 4 days crosslinking.

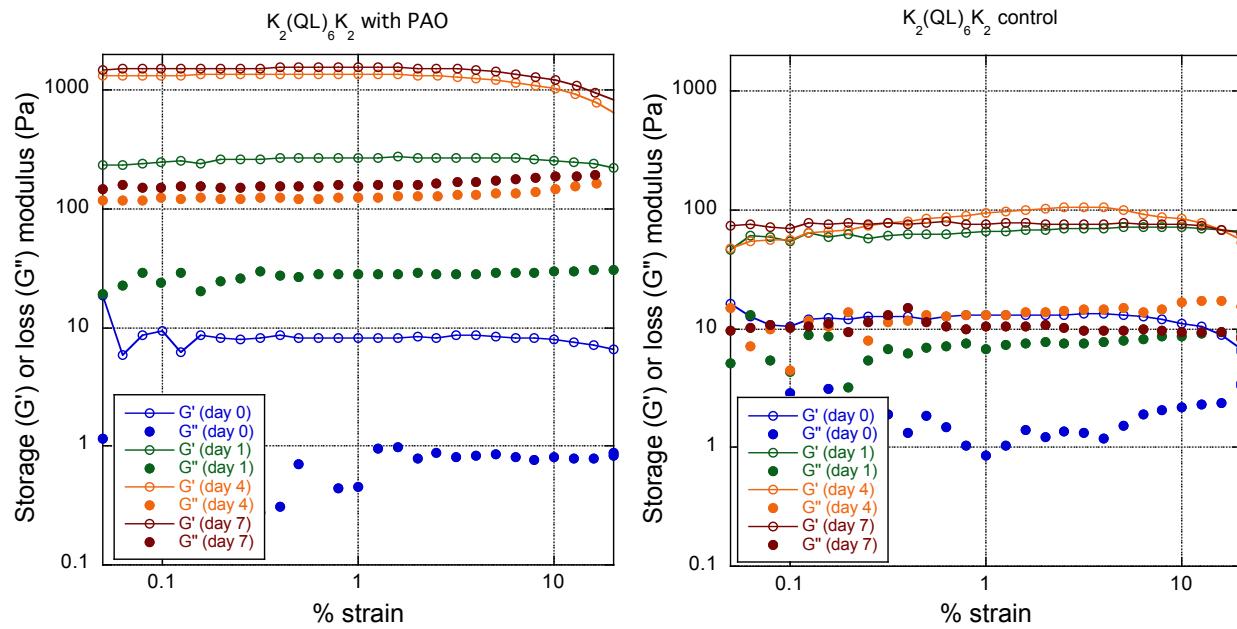


Figure S5. Rheology of a hydrogel formed from **MDP3**, $K_2(\text{QL})_6K_2$ (*left*) in the presence of PAO enzyme (*right*) in the absence of PAO enzyme. G' increases dramatically for four days and levels off well above 1000 Pa. Results are comparable to those observed for **MDP1**. Without PAO G' increases from day 0 to day 1 but levels off and never exceeds 100 Pa.