

Supporting Information

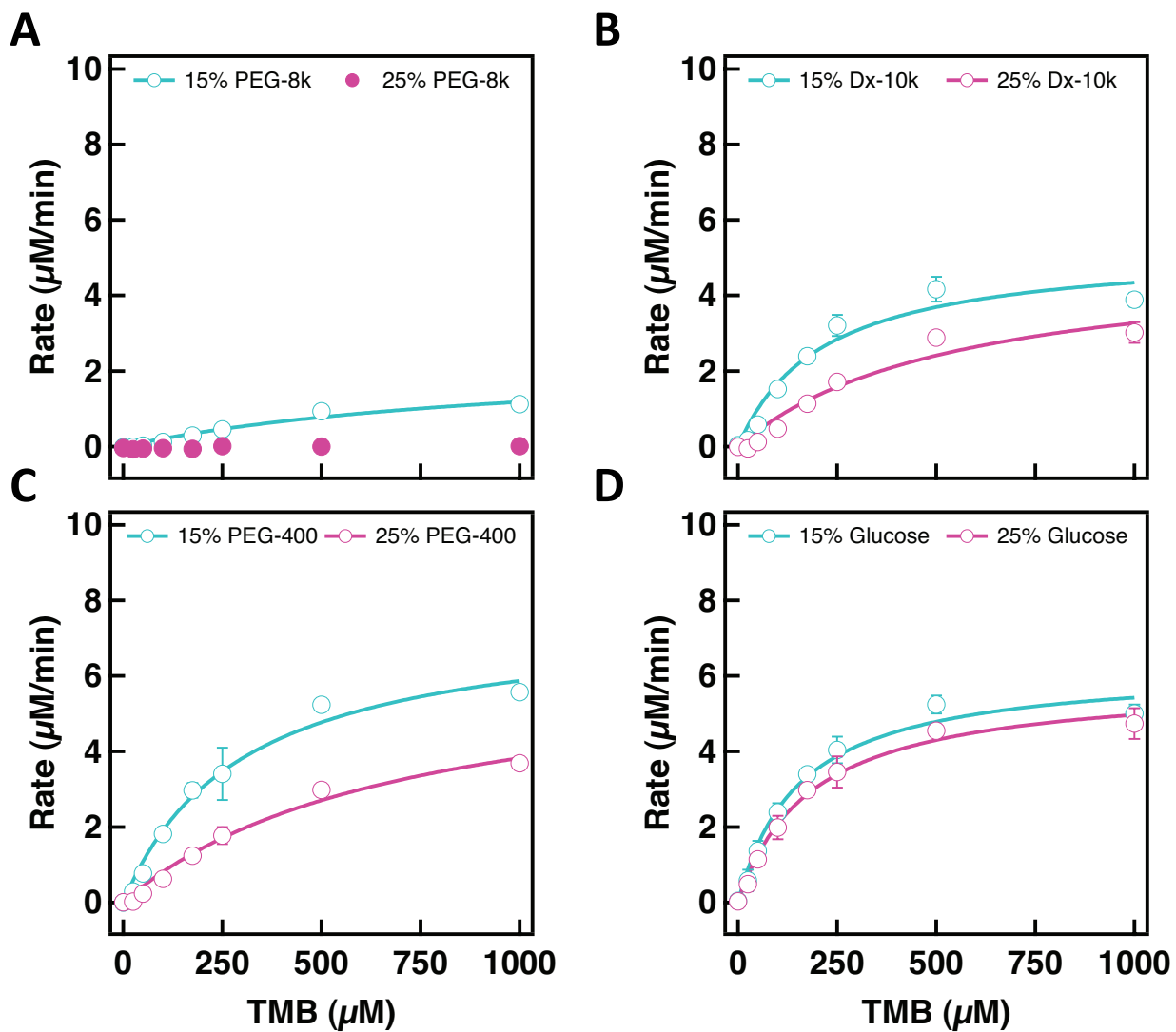
Interactions of Macromolecular Crowding Agents and Cosolutes with Small Molecule Substrates: Effect on Horseradish Peroxidase Activity with Two Different Substrates

*William M. Aumiller Jr., Bradley W. Davis, Emmanuel Hatzakis and Christine D. Keating**

Department of Chemistry, The Pennsylvania State University

University Park, PA 16802, United States

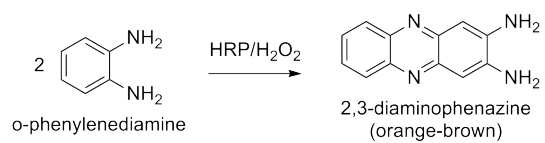
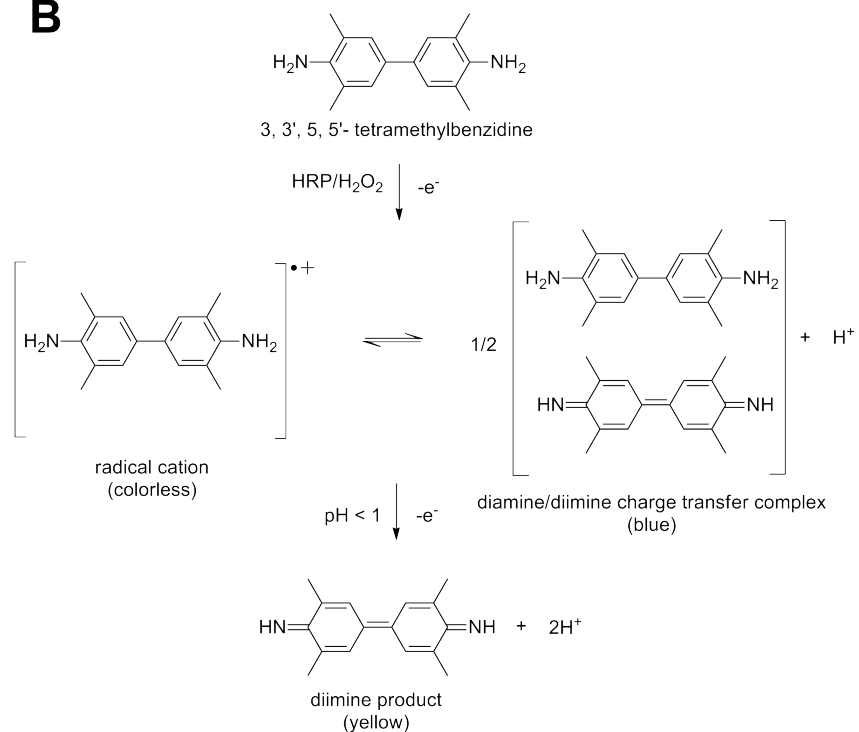
*keating@chem.psu.edu



Supporting Figure 1. Additional kinetic traces for PEG 8k, dextran 10k, PEG 400 and glucose at 15% and 25%.

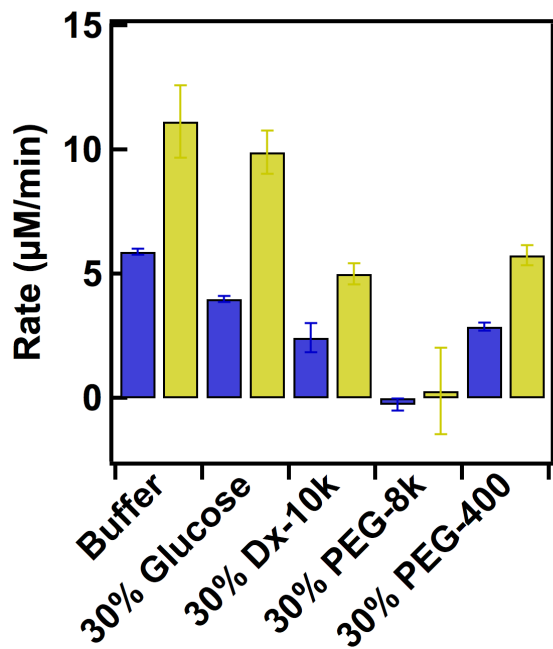
Supporting Table 1. Viscosity of 10%, 20%, and 30% solutions at lab temperature (17 °C) and NMR experiment temperature (25 °C).

Media	Wt. %	Viscosity (cP) at 17 °C	Viscosity (cP) at 25 °C
Buffer	0	1.090 ± 0.003	0.931 ± 0.008
PEG 8k	10	6.37 ± 0.04	5.12 ± 0.04
	20	21.5 ± 0.1	-
	30	58.6 ± 0.4	-
Dextran 10k	10	3.08 ± 0.06	2.55 ± 0.02
	20	8.25 ± 0.08	-
	30	23.1 ± 0.5	-
PEG 400	10	1.709 ± 0.009	1.46 ± 0.01
	20	2.68 ± 0.01	-
	30	4.38 ± 0.08	-
Glucose	10	1.53 ± 0.01	1.29 ± 0.02
	20	2.27 ± 0.02	-
	30	3.39 ± 0.06	-

A**B**

Supporting Scheme 1. Reaction schemes for HRP with the substrates used (A) OPD and (B)

TMB.



Supporting Figure 2. Comparison of the reaction rates for the blue product and the yellow product in each of the 30% crowding agents and cosolutes.