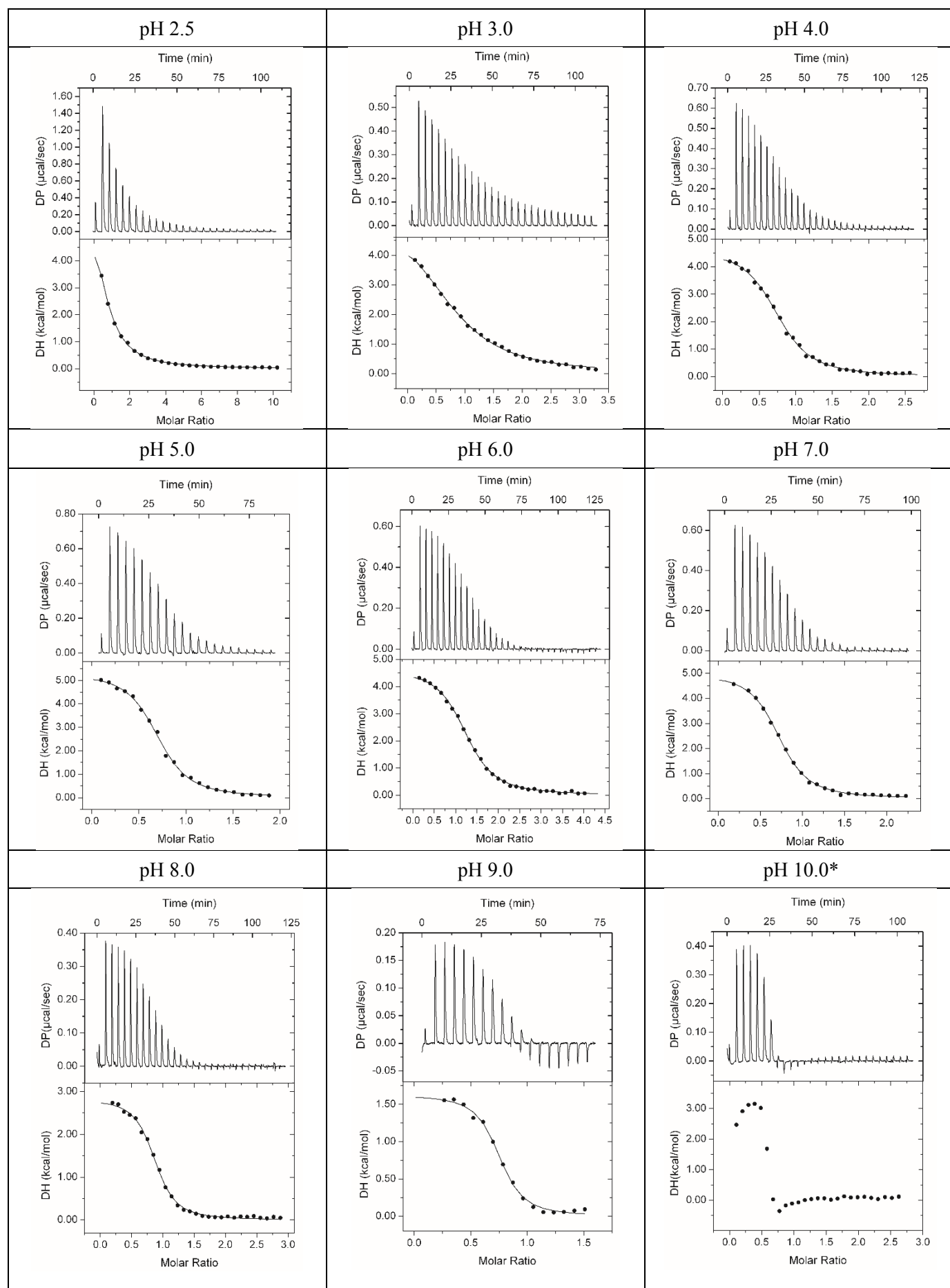
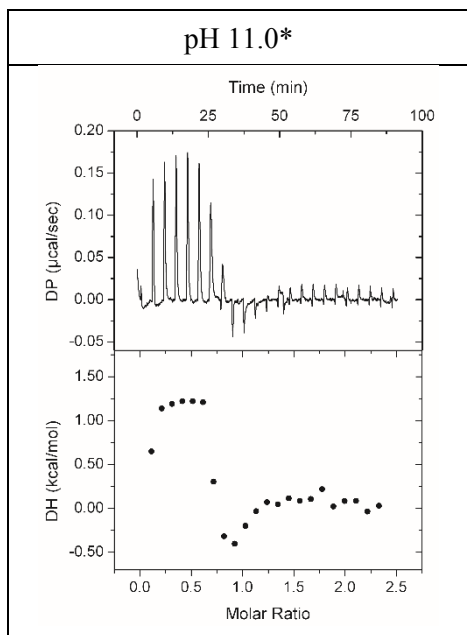


**Fig. S3. Microcalorimetric titrations of solute binding proteins and cytosolic ligand-binding domains with ligands at different pH.**

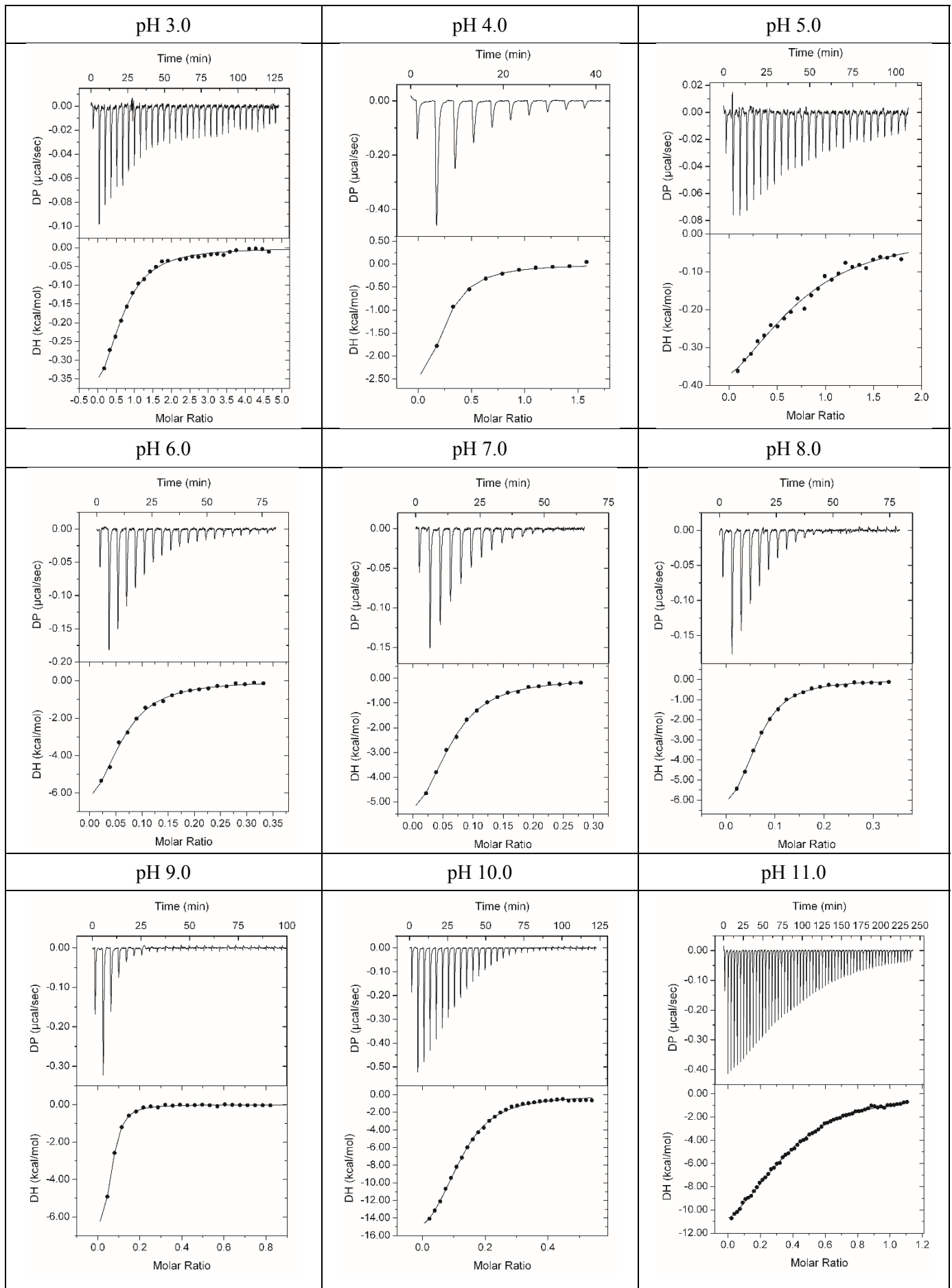
**D-maltose recognition by the maltose binding protein (MBP)**



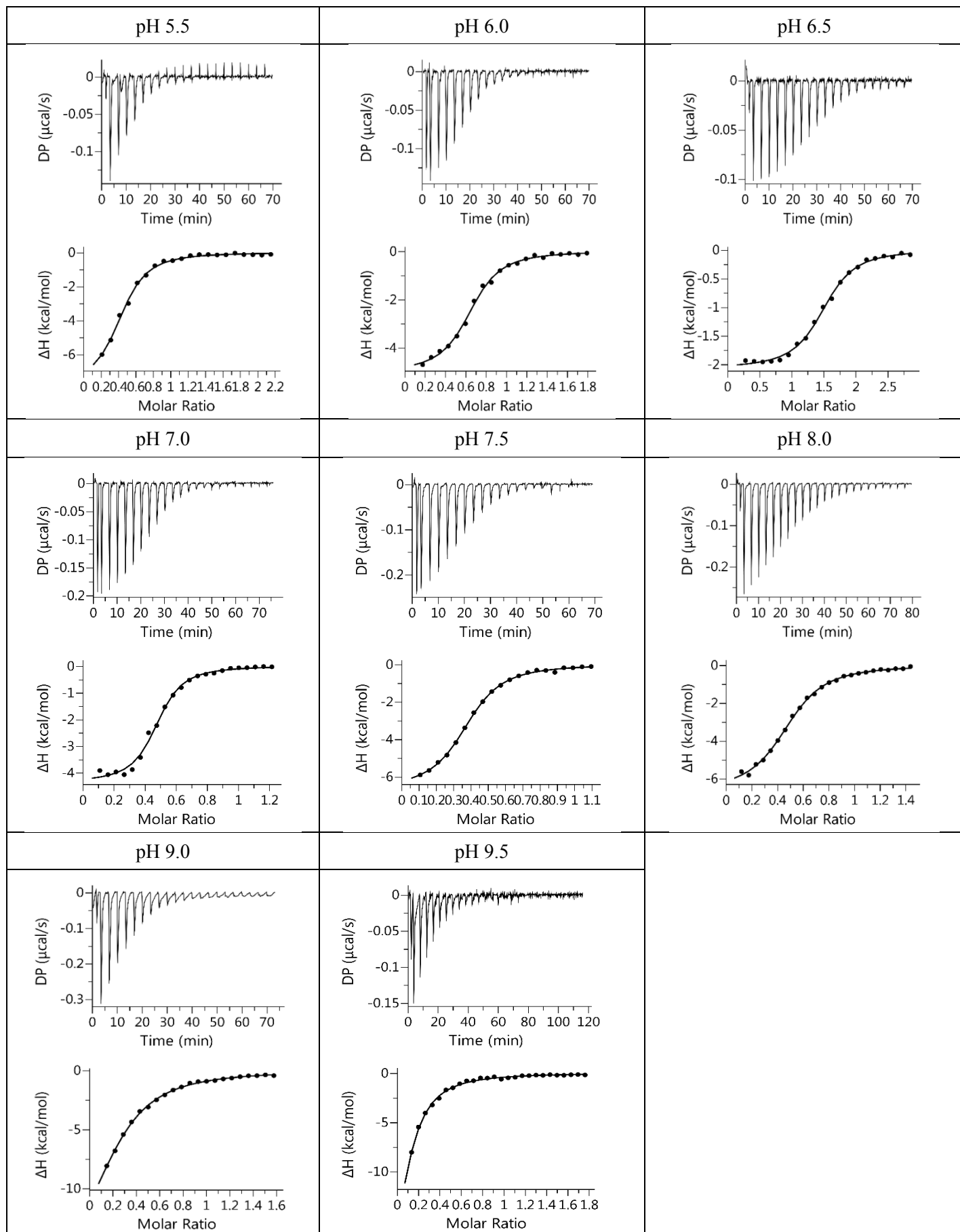


\* Data could not be analysed in a satisfactory manner. There was a rapid transition from binding to saturation, indicative of a high-affinity binding. This binding was therefore defined as  $K_D$  below 1  $\mu\text{M}$ .

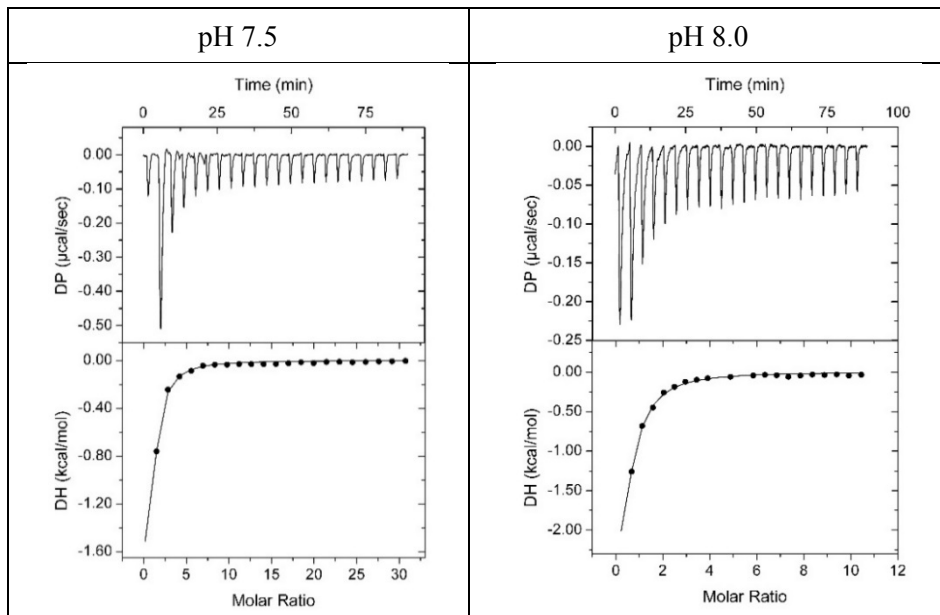
# L-ornithine recognition by E6B08\_RS28125



# Toluene recognition by TodS-Nter



# Indole-3-pyruvic acid recognition by AdmX-LBD



# Benzonitrile recognition by TtgV

