$\boldsymbol{p}\boldsymbol{H}_{I}$

every amino acid has characteristic pH_I every protein also has characteristic pH_I

net charge

pH < pH_I positive $pH = pH_I$ neutral

pH > pH_I negative

protein molecules repel each other protein molecules attract each other

protein molecules repel each other

precipitate

pH of milk = 6.3 pH_I of casein = 4.7