

- (iii) The table below shows the approximate concentration of some of the substances in the blood plasma, the glomerular filtrate and the urine leaving the collecting duct.

substance	concentration in blood plasma (g dm ⁻³)	concentration in glomerular filtrate (g dm ⁻³)	concentration in urine leaving collecting duct (g dm ⁻³)
amino acids	0.50	0.50	0.00
glucose	1.00	1.00	0.00
inorganic ions	7.30	7.30	15.60
nitrogenous waste (not including urea)	0.03	0.03	0.28
protein	80.00	0.00	0.00
urea	0.30	0.30	21.00

Some of the changes observed between the glomerular filtrate and the urine are as a result of activity in the proximal convoluted tubule.

With reference to the table above, explain how these observed changes in concentration are brought about by the **proximal convoluted tubule**.