Supplementary Information: Values used to calculate δ and β

Table 1 Chemical formula and density values used for estimating delta and beta values as displayed in Figure 10

Substance	Chemical Formula	Density (gcm^{-3})
Water	H_2O	1
100% EtOH	C_2H_6O	0.79
70% EtOH	70% C_2H_6O, 30% H_2O	0.88
10% NBF	3.7% CH_20 96.3% H_2O	1.02

Table 2. Chemical formula, densities and weighting used to calculate delta and beta values of native fibrillar type 1 equine collagen.

Amino Acid	Proportion (/1000)	Density (g/cm3)	Formula	δ	β	Weighted δ	Weighted β
Hydroxyproline	104	1.45	$C_5H_9NO_3$	$9.93x10^{-7}$	$5.24x10^{-10}$	$1.03x10^{-4}$	$5.45\ x10^{-8}$
Aspartic acid	50	1.7	$C_4H_7NO_4$	$1.15\ x10^{-6}$	$6.73\ x10^{-10}$	$5.73x10^{-5}$	$3.37\ x10^{-8}$
Threonine	22	1.3	$C_4H_9NO_3$	$8.96\ x10^{-7}$	$4.85\ x10^{-10}$	$1.97x10^{-5}$	$1.07\ x10^{-8}$
Serine	39	1.6	$C_3H_7NO_3$	$1.09\ x10^{-6}$	$6.26\ x10^{-10}$	$4.26x10^{-5}$	$2.44\ x10^{-8}$
Glutamine	97	1.364	$C_5H_{10}N_2O_2$	$9.41\ x10^{-7}$	$4.62\ x10^{-10}$	$9.13x10^{-5}$	$4.48\ x10^{-8}$
Proline	142	1.064	$C_5H_9NO_2$	$7.35\ x10^{-7}$	$3.59\ x10^{-10}$	$1.04\ x10^{-4}$	$5.09\ x10^{-8}$
Glycine	219	1.161	$C_2H_5NO_2$	$7.93\ x10^{-7}$	$4.51\ x10^{-10}$	$1.74\ x10^{-4}$	$9.88\ x10^{-8}$
Alanine	120	1.432	$C_3H_7NO_2$	$9.89\ x10^{-7}$	$5.23\ x10^{-10}$	$1.19\ x10^{-4}$	$6.27\ x10^{-8}$
Valine	28	1.23	$C_5H_{11}NO_2$	$8.62\ x10^{-7}$	$4.12\ x10^{-10}$	$2.41\ x10^{-5}$	$1.15\ x10^{-8}$
Methionine	4	1.178	$C_5H_{11}NO_2S$	$8.11\ x10^{-7}$	$1.51\ x10^{-9}$	$3.24\ x10^{-6}$	$6.04\ x10^{-9}$
Isoleucine	13	1.207	$C_6H_{13}NO_2$	$8.50\ x10^{-7}$	$3.92\ x10^{-10}$	$1.10\ x10^{-5}$	$5.09\ x10^{-9}$
Leucine	32	1.293	$C_6H_{13}NO_2$	$9.10\ x10^{-7}$	$4.19\ x10^{-10}$	$2.91\ x10^{-5}$	$1.34\ x10^{-8}$
Tyrosine	5	1.46	$C_6H_{11}NO_3$	$1.01\ x10^{-6}$	$5.11\ x10^{-10}$	$5.03\ x10^{-6}$	$2.55\ x10^{-9}$
Phenylalanine	19	1.34	$C_9H_{11}NO_2$	$9.15\ x10^{-7}$	$4.14\ x10^{-10}$	$1.74\ x10^{-5}$	$7.86\ x10^{-9}$
Histidine	11	1.49	$C_6H_9N_3O_2$	$1.01\ x10^{-6}$	$4.98\ x10^{-10}$	$1.11\ x10^{-5}$	$5.47\ x10^{-9}$
Hydroxylysine	13	1.268	$C_6H_{14}N_2O_3$	$8.82\ x10^{-7}$	$4.41\ x10^{-10}$	$1.15\ x10^{-5}$	$5.73\ x10^{-9}$
Lysine	26	1.13	$C_6H_{14}N_2O_2$	$7.93\ x10^{-7}$	$3.69\ x10^{-10}$	$2.06\ x10^{-5}$	$9.60\ x10^{-9}$
Arginine	56	1.42	$C_6H_{14}N_4O_2$	$9.83\ x10^{-7}$	$4.72\ x10^{-10}$	$5.50\ x10^{-5}$	$2.64\ x10^{-8}$
Total	1000				**Weighted Averages**	**$8.99\ x10^{-7}$**	**$4.74\ x10^{-10}$**