



Viscosity of PureCol®, Nutragen®, and FibriCol® Collagen

Viscosity is the ‘thickness’ or internal friction of a fluid. Viscosity is a measure of the resistance of a fluid which is being deformed by shear stress. A collagen solution is a non-Newtonian fluid - a fluid whose flow properties are dependent on shear stress. Pure water has viscosity of approximately 1 centipoise (cP) at 20°C. Diagram 1 shows a representative viscosity measurement curve of a purified collagen solution at 25°C at varying concentrations.

The *PureCol®*, *Nutragen®*, and *FibriCol®* collagen products have been evaluated for viscosity using a Brookfield DVII+2 viscometer. Known standards were used to calibrate the instrument. The temperature of the collagen solutions was controlled at 25°C.

The viscosities were tested with appropriated sized spindles and the viscometer set at the appropriate RPM. Specific data about each product are in table 1. The viscosity results are shown in Graph 1 and indicate correlation between collagen concentration and viscosity.

Diagram 1

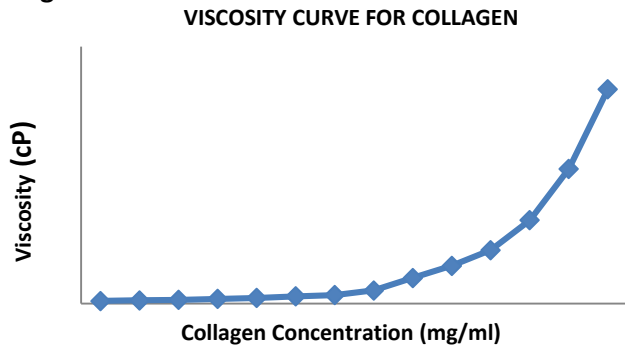


Table 1

Product	Target Concentration (mg/ml)	Lots Tested	Concentration Range (mg/ml)	Average Viscosity (cP)
PureCol®	3	3	3.1 to 3.2	32
Nutragen®	6	3	5.8 to 6.2	358
FibriCol®	10	2	9.6 to 9.9	1425

Graph 1

