Type I collagen hydrogels have been used successfully as three-dimensional substrates for cell culture and have shown promise as scaffolds for engineered tissues and tumors. A critical step in the development of collagen hydrogels as viable tissue mimics is quantitative characterization of hydrogel properties and their correlation with fabrication parameters, which enables hydrogels to be tuned to match specific tissues or fulfill engineering requirements. A significant body of work has been devoted to characterization of collagen I hydrogels; however, due to the breadth of materials and techniques used for characterization, published data are often disjoint and hence their utility to the community is reduced [1)].

1)
Antoine EE, Vlachos PP, Rylander MN. Review of collagen I hydrogels for bioengineered tissue microenvironments: characterization of mechanics, structure, and transport. Tissue Eng Part B Rev. 2014 Dec;20(6):683-96. doi: 10.1089/ten.TEB.2014.0086. Epub 2014 Jul 22. Review. PubMed PMID: 24923709; PubMed Central PMCID: PMC4241868.