

عنوان مقاله:

A Study on Ratio of Loss to Storage Modulus for the Blood Clot

محل انتشار:

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تعداد صفحات اصل مقاله: 6

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خلاصه مقاله:

In this study, the rheology of blood clot is measured with the help of rotational rheometer. Several shear strains (0.5, 1 and 2%) are applied with two frequencies (5 and 10 Hz) from the incipient time of clot formation and the response of the sample is measured in the form of shear stress and the phase lag which is interpreted with storage and loss moduli. In this study the ratio of loss to storage modulus is studied and the blood clot gel-point as the transition from viscoelastic fluid to viscoelastic solid is investigated. By increasing the frequency, $\tan \delta$ decreases before the gel-point and increases after the gel-point which indicates the viscoelastic fluid and viscoelastic solid behaviour, respectively. Moreover, by increasing the shear strain, $\tan \delta$ varies with lower rate at liquid stage ($Ra1$ and $Ra3$) and with higher rate at solid stage ($Ra2$ and $Ra4$). It is also shown that increasing the shear strain causes a delay on gel-point formation.

کلمات کلیدی:

Blood Clot Loss to Storage Modulus Ratio Gel-point

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