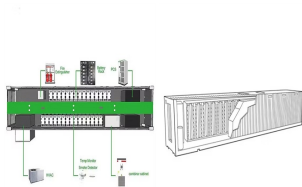
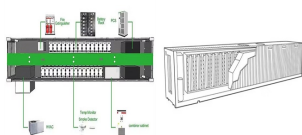


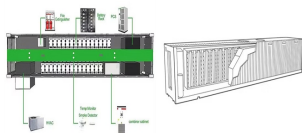
# CHANGES IN PROTEIN STORAGE MODULUS



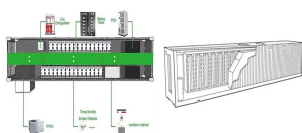
Is there a relationship between size of protein aggregates and storage modulus? However, a negative relationship between the size of protein aggregates and the storage modulus of gels was observed, due to that more cross links were induced by glutaraldehyde when smaller protein particles were present in gel network. 1. Introduction Soy proteins are widely used as ingredients in food products because of its gelling properties.



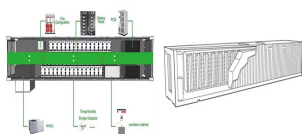
What is the storage modulus of a soy protein gel? Storage modulus ( $G'$ ) strongly depends upon the interactions and cross-links between protein molecules in the gel structure. Renkema (2004) reported that rheological properties of heat-induced soy protein gels connected to the coarseness of the gel and curvature of the strands in the gel.



Does water holding capacity and storage modulus of chemical cross-linked soy protein gels depend on size? Conclusion The water holding capacity and storage modulus of chemical cross-linked soy protein gels directly related to the size of protein particles. Protein aggregates with different sizes could be obtained by varying 7S/11S ratio in the mixture. Larger particles were formed mainly by B polypeptides through hydrophobic interaction.

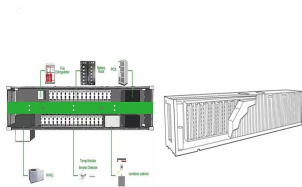


What is storage modulus? The storage modulus is a measure for the portion of the deformation energy introduced through the motor movement and elastically stored in the sample, which gathers information on the inner structure of three-dimensional network in gel system.

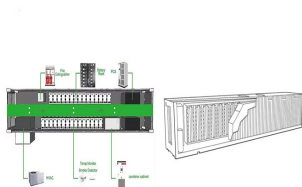


What is the storage modulus of cross-linked gels? The storage modulus of cross-linked gels were determined via a DHR-1 rheometer (TA Instrument, USA), equipped with a parallel plate geometry (40 mm diameter and 1 mm gap) at 25°C.

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What is the relationship between microstructural and physicochemical properties of protein gels? Many researchers had confirmed the relationships between the microstructural and physicochemical properties of gel and the particles incorporated into the network of heat-induced, cold-set and enzyme-induced protein gels ( Nieuwland et al., 2016; Urbonaite et al., 2016; Wang et al., 2017 ).



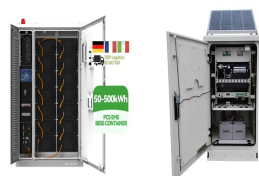
The rheological properties showed that the earliest gel point and the highest storage modulus ( $G'$ ) and loss modulus ( $G''$ ) were acquired by L. casei-G, whereas the  $G'$  curve of L. lactis-G was



According to the rheological characteristics, APPJ treatment could improve protein cross-linking, raise storage modulus, and promote the development of protein gel network structure. These findings demonstrated ???



Melt down scores decreased significantly after five weeks of storage in both the high protein and control ice cream samples (Fig. 7 d). The panellists observed higher melting rate ???



Download scientific diagram | Changes in storage modulus ( $G'$ ; solid line) and phase angle (dashed line) during gelation induced by heat treatment of CaCl<sub>2</sub>-aggregated whey protein isolate (18%

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Retrogradation involves the reorganization of gelatinized starch which influences the stability of starch pastes during storage ( Slade & Levine, 1987).The retrogradation changes of ???



The sample was allowed to stand for 3 min before the test. Storage modulus ( $G''''$ ), loss modulus ( $G''''$ ), and  $\tan\delta$  ( $G''''/G''''$ ) were recorded at a constant strain amplitude of 0.5 %and ???



Bars indicate standard deviations. from publication: Changes in protein solubility, fermentative capacity, viscoelasticity and breadmaking of frozen dough | The use of frozen dough remedied



Our studies have indicated that ultrasonic storage modulus ( $G''''$ ), a measure of fraction of applied energy stored by a system, can provide valuable information regarding the nature of PPI in high concentration protein solutions.



The purpose of this work was to establish ultrasonic storage modulus ( $G''$ ) as a novel parameter for characterizing protein-protein interactions (PPI) in high concentration ???



Changes in  $G''''$  values (storage modulus, Pa) of different vegetal-milk-based yogurt-like structures during storage for a period of 5 days are reported in Figure 5.  $G''''$  is a rheological parameter

# CHANGES IN PROTEIN STORAGE MODULUS



Download scientific diagram | Changes in storage modulus ( $G'$ ) of myofibrillar proteins after oxidative modification by different linoleic acid concentration ( : 0 mmol/L; : 0.25 mmol/L; : 0.5



$G''$  (Pa) and  $G'$  (Pa) of MP gel with PC and KC (1 and 2%) are shown in Fig. 3. During this cryoprotective study,  $G''$  (Pa) and  $G'$  (Pa) of all MP gel samples decreased during 60 days frozen storage



Change in storage modulus ( $G'$ ) of protein isolates during temperature-induced gelation in a rheometer. Top: Soaked protein extract (SPE). Bottom: Alkaline protein extract (APE). Grey full lines



The elastic property of protein is expressed as storage modulus ( $G'$ ), whereas the viscosity property is expressed as the loss modulus ( $G''$ ) (Zhang et al., Citation 2017). So rheological properties are usually used to



The storage modulus ( $G'$ ), loss modulus ( $G''$ ), and  $\tan \delta$  ( $G''/G'$ ) were calculated for all the treatments to determine changes in the viscous and elastic properties of the mixes and