

Abstract ID: 122241**ANTIOXIDANT SMART HYDROGELS FOR
ACTIVE FOOD PACKAGING APPLICATIONS**

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This scientific study focused on developing binary hydrogels by incorporating tomato powder into gelatin matrices, using crosslinking and casting techniques. The incorporation of tomato powder aimed to enhance the hydrogels' antioxidant and antimicrobial properties. Hydrogel characterization was assessed in terms of solubility, swelling ratio, and moisture barrier properties, alongside the surface morphology of the binary hydrogel was observed through scanning electron microscopy. The incorporation of tomato exploited the smart nature of the hydrogel which could be explored extensively in active food packaging applications.

The binary hydrogel demonstrated very good surface morphology with uniform surface thus corroborating with the low solubility, swelling ratio and moisture barrier properties making it suitable for active food packaging applications. Further, the findings indicated that the addition of tomato powder significantly improved the hydrogels' antioxidant and antimicrobial activities.

These enhanced characteristics position the developed hydrogels as promising candidates for food packaging applications, providing effective preservation and protection benefits. Overall, this work highlights the potential of bioactive materials in creating functional packaging solutions.

Abstract ID: 105918**STUDY ON DIELECTRIC RELAXATION BEHAVIOUR
OF SOME AgI DOPED GLASS NANO-COMPOSITES**

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