# **Properties of fish gelatin film containing epigallocatechin gallate fabricated by thermo-compression molding**

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An alternative approach towards more producible active films based on fish gelatin and epigallocatechin gallate (EGCG) fabricated by thermo-compression molding was investigated in this study. This strategy permitted the reduction of production times. Furthermore, the phenolic compound used was epigallocatechin gallated (EGCG), a natural antioxidant, which promoted interactions with film matrix, as shown by Fourier transform infrared (FTIR) spectroscopy, total soluble matter (TSM), x-ray diffraction (XRD) and thermo gravimetric analyses (TGA). These interactions led to the formation of homogeneous structures, as observed by scanning electron microscopy (SEM), indicating a good compatibility among all the components of the mixture. Films with EGCG at 5.71% and 17.14% showed appropriate mechanical properties. In addition, higher EGCG concentrations provided films with a rougher and hydrophobic surface, as indicated by lower gloss and higher water contact angle values. Therefore, optimum level of EGCG rendered satisfactory functional properties of thermo-compression molded gelatin films for food packaging applications.