We recently reported fossils of ancient chromosomes in the remains of a woolly mammoth that died 52,000 years ago (Sandoval-Velasco et al., Cell 2024). The fossils preserve the structure of ancient chromosomes including chromosome territories, compartments, and loops. We hypothesized that the three-dimensional arrangement of the DNA fragments in the sample has been preserved in a glassy state similar to that created via dehydration during food processing. To explore this hypothesis, we used in situ Hi-C to examine genome architecture in (i) fresh beef, (ii) beef after 96 h at room temperature, and (iii) dehydrated beef after a year at room temperature. We observed chromosome territories, compartments, and loops in both the fresh and dehydrated beef. These features were absent in the beef exposed at room temperature without dehydration. Strikingly, chromatin architecture in a year-old dehydrated beef was robust to many perturbations, like getting hit by a fastball, immersed in acid, run over by a car, dropped in liquid nitrogen, and pulverized with a shotgun.