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(54) **THERMAL GELATION OF FOODS AND BIOMATERIALS USING RAPID HEATING**

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See application file for complete search history.

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(57) **ABSTRACT**

The invention uses rapid heating to effect a material property change in a biomaterial. The biomaterial is heated to a predetermined real temperature, whereas the biomaterial's total thermal treatment is described by an equivalent temperature and an equivalent time defining a point above a minimum gel set temperature line, above a reduction in bacteria line, below a water loss line, and below a maximum gel set temperature line. According to one aspect of the invention, the biomaterial is heated by exposing the biomaterial to a relatively uniform electric field. The material is

