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[\[PDF \(96K\)\]](#) [\[References\]](#)**Heat-Induced Gelation of Charcoal-Treated Serum Protein**[Chen NI](#)¹⁾ and [Shigeru HAYAKAWA](#)¹⁾*1) Department of Biochemistry and Food Science, Faculty of Agriculture, Kagawa University*

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The gel strength of charcoal-treated bovine serum and porcine serum proteins at a concentration of 8% was determined with different concentrations of NaCl after heating at 80°C for 15 min at pH 7.0. The charcoal treatment considerably enhanced the gel strength of porcine serum protein, and also improved gel strength of bovine serum protein at NaCl concentrations between 75 mM and 150 mM. The gel strength of commercial PSA and BSA and that of fractionated bovine and porcine proteins by ion-exchange chromatography were also determined at a constant NaCl concentration. With the charcoal treatment, the gel strength of fractions containing albumin increased, while that containing globulin decreased. The gel strength of charcoal-treated bovine serum and porcine serum remarkably increased by the addition of the egg white, ovalbumin and glutathione. The promotion of gel formation with glutathione and ovalbumin seemed to result from the interaction between sulfhydryl groups in glutathione and ovalbumin and intramolecular disulfide bonds in the serum protein, thereby resulting in the highly organized matrix.

Keywords: [heat-induced gelation](#), [charcoal-treatment](#), [gel strength](#), [serum protein](#)[\[PDF \(96K\)\]](#) [\[References\]](#)Download Meta of Article [\[Help\]](#)

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