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Optimum Condition of High Pressure Treatment for the Preparation of Lysozyme-Dextran Complex Found by Random-Centroid Optimization

[Kenjin NAKAMURA](#)¹⁾, [Satoshi HATANO](#)¹⁾, [Akiyoshi MATSUOKA](#)¹⁾, [Noboru FURUKAWA](#)¹⁾, [Tsuyoshi TAKAHASHI](#)¹⁾ and [Yoshitada YAMANAKA](#)¹⁾

1) *Department of Zootechnical Science, Tokyo University of Agriculture*

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The lysozyme-dextran complex (LDC) was prepared in the liquid state using high pressure treatment. This method was able to shorten the reaction period for the preparation of LDC and to suppress the formation of melanoidin, although the production rate of LDC was decreased. The maximum production rate of LDC was attained by 20 experiments using the random-centroid optimization (RCO) method. The optimum condition for the preparation of LDC was pH 4.5, 0.1 M NaCl, 192 MPa, 19.3°C and the treatment time was 88 min, under which one-tenth of the lysozyme formed the complex. Optimization by the RCO method was successful in this study, and is reasonably expected to be a practical and powerful tool in various research fields.

Keywords: [lysozyme-dextran complex](#), [high pressure](#), [random-centroid optimization](#)



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