

Purification and Some Properties of a Lectin from
Canavalia ensiformis L.

E2

Dong Jae Lee and Kwang Soo Roh

Department of Biology, Keimyung University

Lectin is a cell-agglutinating and carbohydrate-binding protein occurring in many plants, particularly legume seeds, and also in bacteria and animals, and widely used in biochemical, immunochemical, and histochemical studies. We have purified the lectin from *Canavalia ensiformis* L. and investigated its some biochemical properties. The lectin from *Canavalia ensiformis* L. which specifically binds to D-glucose was purified by affinity chromatography using sephadex G-100. The final affinity chromatography step resulted in 637.1 folds purification with 25% of recovery yield. SDS-PAGE showed double protein band. Among the tested red blood cell, the purified lectin agglutinated rabbit red blood cell, but not agglutinated human red blood cells (A, B, AB, O), mouse, bovine, rat and porcine. The optimal pH and thermal stability of the purified lectin were pH 7.0 and 20-50°C, respectively.

Keywords: *Canavalia ensiformis* L., hemagglutination activity, lectin, purification