

Subunit Association and Heterogeneity of *Limulus polyphemus* Hemocyanin[†]

Michael L. Johnson^{*,‡} and David A. Yphantis

ABSTRACT: The molecular weights of the 6S, 24S, 36S, and 60S components of *Limulus polyphemus* hemocyanin were determined by high speed sedimentation equilibrium to be 69 400, 856 000, 1 690 000, and 3 160 000. The behavior of this hemocyanin appears to be similar to that of other arthropod hemocyanins where the first aggregation step is the for-

mation of a hexamer of the 6S monomer. Here the larger aggregated states (24S, 36S, and 60S) are successive dimers of an unobserved hexamer (16S). The 24S-36S-60S association was found to be heterogeneous, suggesting that 24S components of different composition may be present.