

The primary task of this thesis was to evaluate, quantify and objectify distances of movement of elite volleyball players in terms of individual game specializations in the horizontal plane of motion. Secondly, these values were mutually compared. For evaluation was used 3D kinematic motion analysis. Analyzed homogeneous group consisted of senior volleyball players at the Champions League level ( $n = 14$ ; age =  $25 \pm 6$  years; height =  $182.3 \pm 6.2$  cm; weight =  $72.1 \pm 5.8$  kg). Processing were four sets, a total of 167 rallies. The average distance one player absolved for 167 rally was 1259.89 meters in whole game, per rally, this value was 8.8 m. The movement of players was divided by a total of four directions relative to the volleyball net forward, backward, left and right. The results showed a high degree of homogeneity in the external load players and brought objective values for comparison between the players' specializations.