Microbial populations in kefir and kefir grains were enumerated by plating. Total lactic acid bacteria, lactococci, lactobacilli and yeast populations increased during fermentation and increased slightly during cold storage. Kefir grains had a lactic acid bacteria : yeast ratio of $10^9 : 10^6$. In further studies, kefir grains were observed using scanning electron microscopy (SEM) methods, which indicated yeast colonization on the surface and middle part of the kefir grain. Three types of lactobacilli (short, long and curved) were noted throughout the grain. Lactococci were not observed under SEM; preparation of kefir grains for SEM may have caused removal of lactococci from the grains.