

The study was undertaken to investigate the effects of temperature and moisture stresses on protein profile and characteristics in the free living third larval stages (L<sub>3</sub>) of *Haemonchus contortus*. Before and after temperature and moisture stress treatment, the L<sub>3</sub> were tested for the induction and expression of Heat-Shock Proteins (HSPs). Proteins were analyzed by Sodium Dodecyl Sulphate-Polyacrylamide Gel Electrophoresis (SDS-PAGE) and immunoblot analysis with alkaline-phosphatase conjugated anti HSP 70 antibody. The stress resulted in an altered protein pattern. It was also revealed that stress treatment did not alter the signals obtained with the anti HSP 70 antibody, but the amount of HSP70 as estimated by densitometry differed between pre and post stress samples. This response in the free living third stage larvae (L<sub>3</sub>) of *H. contortus* may be aimed at protecting the parasite against molecular damage and ensuring survival during stressful periods.