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DEVELOPMENT OF CONDITIONS FOR *IN-VITRO* MAINTENANCE OF ADULT *SETARIA DIGITATA*

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In-vitro maintenance of filarial parasites is necessary for collection of excretory/secretory/life cycle stage specific antigens, metabolic and enzyme studies, transport of live parasite for DNA extraction, production of larval stages under defined conditions etc. However very little information is available on conditions needed for maintenance in defined media.

We have defined conditions suitable for maintenance of adult *Setaria digitata* in *in-vitro* culture. Maximal survival (upto 17 days) was obtained with Eagle's Minimum Essential Medium at 37°C. Serum supplementation of the nutrient medium with serum improved survival. The survival depended on the volumes of culture medium and on the volume and composition of the gas phase. The best combination was approximately 10 ml of medium/worm/day in 500 ml flasks and in 10% CO_2/90% N_2 with media change at 3-4 day intervals. This high CO_2 requirement does not appear to be related to buffering capacity. It is possible that *S.digitata* is capable of fixing CO_2[1]. Accumulation of toxic metabolites in culture affected the survival of the parasite *in vitro*.

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Reference

1. Rathaur S. *et al.* (1982) *Z. Parasitenkd.* 68: 331-338