

Ticks repellent effect of microencapsulated Icaridin 20%

An orientation - Study performed on the nymphal stages of *Ixodes Ricinus*

Nymphal stages of the tick *Ixodes Ricinus* were collected in the archipelago of Stockholm. They were kept in small net cages supported with wet filter papers and grass at a temperature of about +22°C.

The test procedure was the following: Petri dishes with an inner diameter of 9.5 cm were provided with 3 pieces of filter paper (Munktell No. 3, 9 cm). The test solutions, 20% microencapsulated Icaridin, were applied along the periphery of the papers. After airdrying, 6 nymphs were placed in the centre of the papers and their behaviour with regard to avoiding the treated area was observed.

After the test, which usually lasted for about 5 min, the nymphs were replaced in the net cages. The Petri dishes were uncovered and exposed to open air. The procedure with the nymphs was repeated after 4, 6, and 8 hours. At each occasion the number of nymphs avoiding the treated area was estimated. The repellency was expressed as the number of avoiding nymphs in relation to the total number of nymphs at each occasion. Thus 6 nymphs avoiding out of a total number of 6 is recorded as 100% repellency. The test was performed mainly in duplicate. Controls with only ethanol were always used. The range was about $\pm 17\%$.

Results

The nymphs avoided the Icaridin treated area after 0, 4, and 6 hours, giving repellency of 100%. After 8 hours only one avoided the treated area, where as the other nymphs passed the treated area, corresponding to a repellency of 16.7%. Thus Icaridin in the tested concentration gave repelling effect for at least 6 hours.

Stockholm 07 08 20

Walborg Thorsell

Walborg Thorsell,
Docent in Experimental Parasitology