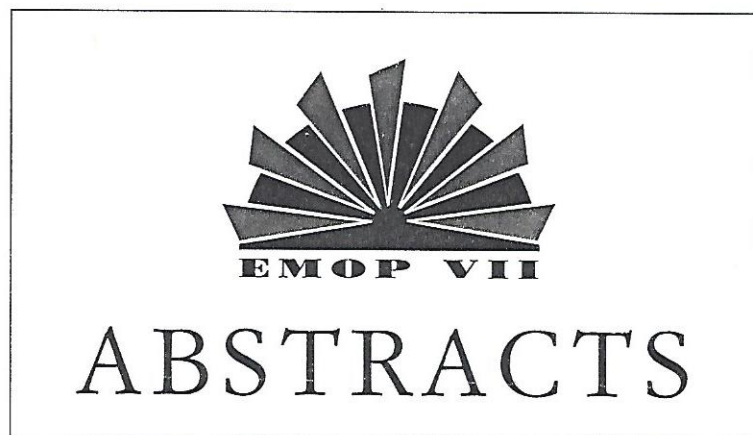


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ACARICIDE AND ANTIBACTERIAL ACTIVITY OF SOME ESSENTIAL OILS

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Acaricide and antibacterial activity of essential oils has been known for long; its limit is the great variability of its chemical components and, consequently, of its effectiveness. Such a limit can be, each time, overcome through a laboratory test carried out on the pathogenic agents to be destroyed. Twenty-eight essential oils were tested on *Streptococcus agalactiae*, *Staphylococcus aureus*, *Escherichia coli* H99, *Pasteurella multocida*, *Actinomyces pyogenes*, *Bordetella bronchiseptica* and on some environmental mites, such as *Caloglyphus berlesei*, *Tyrophagus putrescentiae* and *Carpoglyphus lactis*. The results were divided in relation to the volatility of the essences: 1) Essences evaporating very slowly and that can be used successfully on litters thanks to their acaricide and antibacterial activity were: *Cinnamomus zeylanicus* - it had a good repellent action on mites and determined a fast and irreversible paralysis of their limbs at a distance of 5/10mm; it had an inhibitory action on *S. agalactiae* (16 mm, range of inhibition) e *P. multocida* (24). *Foeniculum vulgare* - it determined motory paralysis of mites and loss of their sensitivity; it had not any repellent action. It acted on *S. agalactiae* (40), *P. multocida* (40) e *S. aureus* (10). *Thymus capitatus* - it had an effective killing action ((6/7 sec.) on mites and acted on *S. agalactiae* (24), *P. multocida* (30), *S. aureus* (107 and *E. coli* K99 (10). *Belargonium graveolens* - it had a good repellent action and killed mites within 20sec.; it acted on *S. agalactiae* (40), *P. multocida* (40), *S. aureus* (22), *A. pyogenes* (12) e *B. bronchiseptica* (8). The *Menta viridis* turned out to have a very strong acaricide action with a killing capacity of only 4/5sec., but it did not act against any bacterium. 2) Among the essences evaporating quickly (within 24 hours) and that did not leave smells either on food or in the environment, the best ones turned out to be: *Salvia officinalis* - it had a clear killing action on mites in 5/6 sec. and a good repellent capacity; it had a very high antibacterial action on *S. agalactiae* (39), *P. multocida* (30), *S. aureus* (36), *A. pyogenes* (24), *B. bronchiseptica* (16) and *E. coli* K99 (20). *Rosmarinus officinalis* - its killing action was less strong than that of *Salvia officinalis* (9/10sec.) and it had a good repellent capacity; it acted on *S. agalactiae* (40), *P. multocida* (26), *S. aureus* (29), *A. pyogenes* (21), *B. bronchiseptica* (14) and *E. coli* K99 (19). The *Citrus lemonum* rind resulted to be the most efficacious essence on *E. coli* K99 (38).