

In the next series of experiments we used the distillation residuum of other charges of MEK and we had coincident results. The 5% solution acted as a perfect repellent, in 1% solution during a longer observation period (2 weeks) a slight feeding of termites (fras) appeared, but simultaneously the mortality of termites occurred. 0.2% solution had still toxic properties.

We gained quite analogical results even with further species *Heterotermes indicola*. In this case a higher effectivity even of lower concentrations can be observed in coincidence with the finer structure of the cuticula and with the smaller dimensions of the body of this species.

The repellent and toxic effects accompanied by the blackening of antennae, palps and legs of the affected termites can be observed when using PCP, a substance applied already for a long time in wood protection. We assume that other, biologically similarly active substances are present in MEK. Especially remarkable is the affection of antennae which is not cleared either by the action of PCP. The repellent effectivity of these substances can be mentioned in connection with the affection of the organs on which there is a great quantity of chemosensitive sense organs, i.e. in the first place of antennae. The majority of stimulations in the colonies of termites is transferred by chemical substances - pheromons (Karlson & Lüscher, 1959) and thus the amputation of the affected antennae can be explained also as a defense reaction of the community to an unfavourable interference endangering the transmission of information in the community. The blackening of antennae is apparently the accompanying phenomenon of the coagulation of the haemolymph in the affected organs in the direct environment of chemoreceptors.

With termites *Kalotermes flavicollis* and *Neotermes castaneus* which even in smaller groups easily form the supplementary reproductives (Lüscher, 1952) experiments are carried out to ascertain whether even by very low concentrations of these substances the transmission of information by pheromons through chemoreceptors will be made impossible.

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