

# ARE COMMERCIAL BAITS TARGETED ON ANTS, SILVERFISH AND COCKROACHES APPLICABLE ALSO FOR DOMESTIC PSOCIDS? FIRST EFFICIENCE REPORT

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Many synanthropic species of insects occur in households and other domestic situations. Some of these pests are very well known to inhabitants, e.g. ants, silverfish or cockroaches. While small insects, such as psocids, are often overlooked. Synanthropic species of psocids (especially from the genera *Liposcelis*, *Lepinotus*, *Trogium*, *Lachesilla*, *Psyllipsocus*, *Dorypteryx*) commonly occur at the same habitats as above mentioned pests, often in the same frequency. They not only infest wide variety of commodities, but also disseminate spoilage micro-organisms and allergens.

Various bait boxes are produced and sold for the control of domestic pests (ants, cockroaches, silverfishes), except for psocids. Thus, in our work we evaluated whether these bait boxes are also efficient on psocid population. We studied mortality of *Liposcelis bostrychophila* and some other synanthropic psocid species (*L. decolor*, *L. brunnea*, *Lepinotus reticulatus*, *Dorypteryx domestica*) exposed to baits (PharEx, Lafarex, Maxforce, Detia) in non-choice and choice tests. Experiments were carried out under laboratory conditions (27° C, 60 % RH), in glass containers 25 ml, diam. 3 cm, in continual darkness. The baits were removed from the boxes and used in amount 0.2 g /per container. Four variants in five replicates (bait alone, bait + food, food alone, no food) were tested for every bait. The tested psocids were from laboratory cultures; ten adults, 1-5 days old/per one container were used.

The preliminary results (Tab. 1) showed, that the baits with insecticide (chlorpyrifos) or insecticide and JHA (pyriproxyfen, boric acid), were effective both in non- choice and choice experiments. The other baits have been either ineffective or the mortality was caused due to sticky surface of baits (e.g. Maxforce – cockroach gel). New "psocid design" formulation should be developed for these active ingredients.

**Table 1.** Efficiency of various baits on psocid *Liposcelis bostrychophila* (choice tests: bait and food).

Bait box	Active ingredient	Mortality in %			
		1 day	7 days	14 days	21 days
Detia (Silverfish)	0.5 % chlorpyrifos	100	-	-	-
PharEx (Pharaoh ants)	0.5 % pyriproxyphen 10 % boric acid	18	84	98	100
Lafarex K (Pharaoh ants)	0.5 % methoprene	0	20	27	33
Maxforce (Pharaoh ants)	0.95 % hydramethylnon	0	16	25	36