

Bed Bugs, "Psychogenic" Itch and "Pyrethroid Resistance" - A Permethrin-Based Tick Repellent Sheet Can Be Used as an Investigation Tool.

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History, Background, shifts of priorities

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| • Borrelia in „Ötzi“ > | 5250 years |
| • DDT (1874) insecticide addiction | 1939ff |
| • DDT banned >= | 1970ff |
| • Permethrin | 1977 |
| • Global 2000 Study, resistance prevention | 1980 |
| • Borrelia burgdorferi | 1982 |
| • pest control → management/Least acute toxicity | 1983 |
| • hypersensitivity,
holisitc risk minimization | 1986 |
| • Permethrin dipping technique for textiles | 1990 |
| • sustainable chemistry | 1995 |
| • white surface for tick detection | 2003 |
| • company-manufactured ready-to-use polymercoating | 2003 |
| • Tick protection sheet | 2009 |
| • Bed Bug protection | 2009 |

Ticks

- protection against bites

other arthropods

- Harvest Mites
- Ants
- Mosquitoes
- *many other (except for Loxosceles)*

Causes for Itch

- exclude entomological causes
- proof entomological causes (bed bugs, midges, mites, „parasites“)

Pest control

- Customer peace of mind, symptomatic after ectoparasite treatment
- pyrethroid resistance
- Treatment failure
- Quality assurance
- *Resistance-related enhanced repellency*

Bed bugs

- Travel protection

Limitations

- not for cats, not against *Loxosceles* spiders
- permanent use and "panacea" are incorrect applications
- Boiling water, ironing and chemical cleaning destroyed the effect

„Resistance“?

- >5 years in use, no claims
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Outlook

workwear for vector management

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