

Instructions for Clients

Methodical procedure during infestation

1) Bed Bug (Cymex Lectularius)

Biology:

Imperfect transformation = development stages: eggs – nymph (5x shedding) – adult. Speed of development depends on environmental temperature, the source/quantity of food (=circulated blood). Speed of development at **20°C from egg to adult takes cca. 2 months. At 25°C cca. 1 month.** Colder environments = slower development. (Egg 5 (30°C) – 22 (15°C days). Under 15°C, the egg development is (temporarily) paused. The Bed Bug sticks its eggs → they cannot be dusted off or shaken off. ***Sprays do not eliminate eggs!*** During all mobile stages they **feed only off blood.** They feed at night for 5-10 minutes, 1-2x a week (depending on temperature). They can survive without feeding for up to 35 weeks (at 22°C).

Preparing for disinfestation:

- Room/spaces everywhere must be **INCREDIBLY DUTIFULLY vacuumed, cleaned, dusted.** The vacuum sack must be packed in a plastic bag and thrown out! The vacuum (including the hose) must be cleaned with warm or boiling water – alt. with a steam cleaner (if available).
- Beds must be cleaned out (if there is anything stored inside them) and everything that cannot be treated by the spray must be put in plastic bags or locked up. Do not move out of the infested room!
- Take off all the linens. Leave them in the room before the procedure and afterwards carefully wash. **Wash at min. 60°C.** What cannot be washed right away, must immediately be put in bags and packed up/isolated. From bags immediately put in a washing machine, used bags must be thrown out.
- Aquariums must be moved out, if not possible, the ventilation must be turned off and the aquarium covered.
- Open, unsecured foods must be cleared from the room, or stored in a cupboard with insulation.
- All electronics must be taken away, or **disconnected from the network**, so must all dishes, and kitchen utensils be put away or safely covered up. Toys should be hidden in insulated cupboards. Fragile and valuable objects should be taken away, or covered on your own responsibility.

Disinfestation Procedure:

Residual carpet spraying of all rooms and spaces with beds (including facilities) + barriers in all spaces with a focus on places where bed bugs are likely to hide.

Safety precautions: Min 8 hours (unless stated otherwise) do not enter the treated spaces – resp. until the chemicals have fully dried.

Instructions after procedure:

- All linens (and bed bug infested) laundry must be **washed at min. 60°C**.
- Treated room (bedroom) must not be vacuumed or mopped or dusted using a liquid for at least one week. This prevents the removal of the active chemicals.
- Be extra careful when cleaning other spaces → presence of bed bugs. Furthermore carefully vacuum (including bed construction and other high-risk places)!
- After the end of the protective period (**8 hours, or according to protocol**) the room can be normally inhabited.

2. Procedure: During the 3.-6. week after the first. Preparation same as with first procedure.

Guarantee: No guarantee can be given for this type of infestation. This is because another host can bring in another wave of infestation.

2) Fleas (Syphonaphera)

Biology:

Perfect transformation = **egg** (1 week) – **larva** – 1,5-5mm (2-3 weeks) – **pupa** (1-2 weeks) - **adult**

From egg to adult flea 4 – 6 weeks. Max. Life expectancy is 1 year.

Eggs are not laid onto host, but onto its „nest“. The dogs/cats fur, carpet, curtain, furniture.

It feeds on the blood of mammals. Eggs are laid after feeding (4-8 pieces), several hundred per life! Larvae feed on organic matter (e.g. adult excrement)

Can transmit infectious agents!

Preparation for procedure:

- Extremely dutiful cleaning. Everything must be cleaned, dusted and **carefully vacuumed**. Especially furniture and bed construction with mattresses. All carpets. The vacuum sack must be packed in a plastic bag and thrown out. The vacuum (including the hose) must then be carefully cleaned, best with warm/boiling water. **Wash at 60°C!**

Safety precautions:

Min 5 hours – unless stated otherwise, do not enter the treated space – resp. until the treatment chemical has dried.

Instructions after procedure:

Do not clean or dust with any liquid for min. 14 days. After the first week of application do not vacuum the treated carpets, to allow treatment to work. After pay close attention to cleaning other spaces – carefully vacuum (ideally every day). After the end of the second week, vacuum again (the spray will not kill eggs and pupae). Continue with daily vacuuming for a min. of another week.

After the end of the protective period (**5 hours, unless stated otherwise**) the room can be normally inhabited.

2. Procedure:

Approximately after a month. According to temperature – see biology and generation interval.

Guarantee:

After the second spray (conducted after 3-4 weeks) **there is a 3 month guarantee**. The guarantee is extended in case of another treatment, the guarantee is applicable only if a second treatment occurs within the set 3-5 week period from the first. The guarantee does not apply if the space is not prepared according to the above instructions.

3) Ants:

a) Lasius Ant (*Lasius Spp.*)

Biology:

Highly social insect living in large colonies.

1 queen (fertile female), workers (sterile females), males (die after wedding flight – „swarming“)

Perfect transformation: eggs laid in spring and summer. **From egg to adult in cca 2 months.**

Workers live for 2-3 years. Queen can live for 15-20 years.

Preparation before procedure:

- Conduct a normal cleaning with an emphasis on eliminating food and leftovers. Other foods must be in sealed containers.
- Treated space must be without pets, aquariums (if unable to move, turn off ventilation and cover).

Procedure:

Depending on location. Ants infiltrate from exterior of building – barrier spray on exterior and eventually interior of building. In case of ants having nest inside building, gel traps are used.

Safety precautions:

After the spray do not enter treated space for 4-5 hours (unless stated otherwise) resp. until the treatment chemical has dried. No limitation on gel application.

Instructions after procedure:

Pay attention to not leaving food available anywhere.

2. Procedure:

In case of need. For example if barriers are accidentally „washed“ outside of building.

Guarantee:

After second treatment **for 3 months**. Guarantee is extended in case of additional treatments, guarantee applicable only if second treatment occurs within the 3-6 week period. Guarantee not applicable if space is not prepared according to instructions above.

b) Pharaoh Ant (*Monomorium pharaonis*)

Biology:

In temperate climates lives predominantly inside buildings. Inside a nest there are multiple female-Queens! They live for approximately 1 year. Workers are yellow-white with a darker end and are cca 2,5 mm long. Workers live cca. 20 weeks. Males are slightly larger with wings.

Development from egg to adult is about 6 weeks (at 27°C). They are omnivores. They spread by splitting colonies (individual workers are capable of finding new colonies)

Preparation before procedure:

- Remove all foods, clean space.
- All foods must be stored in sealed containers or in a fridge/freezer.
- All spaces must be available for procedure. All colonies must be destroyed.
- DO NOT USE any sprays against insects!

Procedure:

Using application of traps against this specific infestant.

Safety precautions:

No limitations after gel application.

Instructions after procedure:

- Do not move stations with traps
- Do not clean up gel traps
- DO NOT USE sprays against insects!

Guarantee:

For 6 months only if we have access to treat all spaces inside building. Guarantee does not apply if everything is not prepared according to instructions above.

4) Cockroaches:

A) German Cockroach (*Blattella germanica* L.)

Biology:

Yellowish to lightly brown with straight black belts on shield. 1-1,5 cm long. Extraordinarily are capable of short flight. Females lay eggs in so called ootheca (capsules), which they create cca 7. Ootheca are light brown in color and contain cca 30 eggs. It takes 2-5 weeks for nymphs to develop. The nymphs are 2-10 mm long and develop for about 40 days (at 30°C) for 1,5 months at lower temperatures. During this time they shed about 5-7x. From egg to adult it takes 2 months (25°C).

Maximum life expectancy of adults is 6 months. It is a night organism and omnivore.

Preparation before procedure:

- Removal of food leftovers, cleaning space.
- All foods must be stored in sealed containers or fridge/freezer.
- All spaces must be made accessible.

Procedure:

Alternative 1: Residual spray. Suitable particularly for storage and uninhabited spaces. Spray applied as a barrier and focused on crevices and small openings where insect can hide, piping, water piping etc.

Alternative 2: Gel application in infested areas. Suitable particularly for areas with continuous activity, or inhabited units etc.

Alternative selected after reviewing specific situation.

Safety precaution:

In case of treatment do not enter space for 4 hours after (unless stated otherwise) – resp. until the treatment chemical has dried.

No limitation in case of gel application

Instructions after procedure:

- Do not use (normal retail) anti insect sprays.
- Keep open spaces clean – be careful especially around possible sources of food.
- Fill up, block off, insulate piping, crevices, small openings etc.

2. Procedure: in third or sixth week after first. Monitoring earliest after 4 weeks. Checkup recommended after 6-8 weeks.

Guarantee: After second treatment for **3 months**. Guarantee is extended from possible additional treatments, guarantee applicable only if second treatment occurs during 3-6 week period. Not applicable, if space is not prepared as per instructions above.

B) Oriental Cockroach (*Blatta orientalis*)

Biology:

Brown-black to black, 2-3 cm long (measured without antennae). Have small wings, but do not fly. Exude a unpleasant smell from their dorsal gland. Females create around 8 oothecas. Oothecas contain 16 eggs. The incubation period is about 44 days (at 30°C) or 80 days (at 20°C). Nymphs hatch from the ootheca resembling adults without wings. Nymphs shed 7-10x. From egg to adult it usually takes around 6 month (30°C) to 1 year at temperatures under 25°C. Adults live for about 2-9 months. It is a nocturnal organism and omnivore. Actively spreads in its environment.

Preparation before procedure:

- Removal of food leftovers, cleaning space.
- All foods must be stored in sealed containers or fridge/freezer.
- All spaces must be made accessible.

Procedure:

Alternative 1: Residual spray. Suitable particularly for storage and uninhabited spaces. Spray applied as a barrier and focused on crevices and small openings where insect can hide, piping, water piping etc.

Alternative 2: Gel application in infested areas. Suitable particularly for areas with continuous activity, or inhabited units etc.

Alternative selected after reviewing specific situation.

Safety precaution:

In case of treatment do not enter space for 4 hours after (unless stated otherwise) – resp. until the treatment chemical has dried.

No limitation in case of gel application

Instructions after procedure:

- Do not use (normal retail) anti insect sprays.
- Keep open spaces clean – be careful especially around possible sources of food.
- Fill up, block off, insulate piping, crevices, small openings etc.

2. Procedure: in third or sixth week after first. Monitoring earliest after 4 weeks. Checkup recommended after 6-8 weeks.

Guarantee: After second treatment for **3 months**. Guarantee is extended from possible additional treatments, guarantee applicable only if second treatment occurs during 3-6 week period. Not applicable, if space is not prepared as per instructions above.

C) American Cockroach (*Periplaneta americana*)

Biology:

Red-brown with light patches. 3-4,5cm long (measured without antennae). Have short wings (males capable of short flight). Females form cca 40 brown black ootheca. The ootheca contain about 16 eggs. Nymphs hatch in about 5-7 weeks (at a temperature of 30 -25°C)

HASAP[®]
CONSULTING

resembling adults without wings. Nymphs shed 7-13x. The development of the egg to an adult takes 8 months (at around 30°C). At lower temperatures takes longer than a year. Their life expectancy is a maximum 2 years.

Preparation before procedure:

- Removal of food leftovers, cleaning space.
- All foods must be stored in sealed containers or fridge/freezer.
- All spaces must be made accessible.

Procedure:

Alternative 1: Residual spray. Suitable particularly for storage and uninhabited spaces. Spray applied as a barrier and focused on crevices and small openings where insect can hide, piping, water piping etc.

Alternative 2: Gel application in infested areas. Suitable particularly for areas with continuous activity, or inhabited units etc.

Alternative selected after reviewing specific situation.

Safety precaution:

In case of treatment do not enter space for 4 hours after (unless stated otherwise) – resp. until the treatment chemical has dried.

No limitation in case of gel application

Instructions after procedure:

- Do not use (normal retail) anti insect sprays.
- Keep open spaces clean – be careful especially around possible sources of food.
- Fill up, block off, insulate piping, crevices, small openings etc.

2. Procedure: Monitoring (traps) at earliest 6 weeks after first treatment. 2. treatment (due to long incubation egg period) **up to 10 weeks after first treatment.**

Guarantee: After second treatment for **3 months**. Guarantee is extended from possible additional treatments, guarantee applicable only if second treatment occurs during 3-6 week period. Not applicable, if space is not prepared as per instructions above.

D) Brown-banded cockroach (*Supellalongipalpa F.*)

Biology:

Brown with lighter bands across buttocks and torso. 1-1,5 cm long. They have short wings and males are capable of short flight. Females create cca 11 oothecas. Ootheca contains 16 eggs. Incubation period is 37-74 days (at 30-24 °C). Hatched nymphs resemble adults without wings. Sheds 6-8x. Development from egg to adult takes cca 8 months at 24°C. At temperatures around 30°C the interval shortens to 4 months. Adults live for a maximum of 3-4 months.

Preparation before procedure:

- Removal of food leftovers, cleaning space.
- All foods must be stored in sealed containers or fridge/freezer.
- All spaces must be made accessible.

Procedure:

Alternative 1: Residual spray. Suitable particularly for storage and uninhabited spaces. Spray applied as a barrier and focused on crevices and small openings where insect can hide, piping, water piping etc.

Alternative 2: Gel application in infested areas. Suitable particularly for areas with continuous activity, or inhabited units etc.

Alternative selected after reviewing specific situation.

Safety precaution:

In case of treatment do not enter space for 4 hours after (unless stated otherwise) – resp. until the treatment chemical has dried.

No limitation in case of gel application

Instructions after procedure:

- Do not use (normal retail) anti insect sprays.
- Keep open spaces clean – be careful especially around possible sources of food.
- Fill up, block off, insulate piping, crevices, small openings etc.

2. Procedure: Monitoring (traps) at earliest 6 weeks after first treatment. 2. treatment (due to long incubation egg period) **up to 10 weeks after first treatment.**

Guarantee: After second treatment for **3 months**. Guarantee is extended from possible additional treatments, guarantee applicable only if second treatment occurs during 3-6 week period. Not applicable, if space is not prepared as per instructions above.

E) Australian Cockroach (*Periplaneta australasiae*)

Biology:

Red-brown with yellow edges around wings. 3-4,5 cm long. Females create 25 ootheca. Ootheca has a chitin case and contains around 24 eggs. Their development occurs at 30 – 36 °C for the duration of 6 weeks. Developed nymphs resemble adults without wings. Nymphs shed 7-13x during 7months. Development from egg to adult takes about 8 months at 30°C. At lower temperatures can be longer than a year. Maximum life expectancy is 6 months. Temperature below 4°C for a duration longer than 8 hours is lethal. This is why their occurrence in temperate climates is *rare*.

Preparation before treatment:

Usually only appears inside jars in our climate – cleaning.

Procedure:

Alternative 1: Residual spray. Suitable particularly for storage and uninhabited spaces. Spray applied as a barrier and focused on crevices and small openings where insect can hide, piping, water piping etc.

Alternative 2: Gel application in infested areas. Suitable particularly for areas with continuous activity, or inhabited units etc.

Alternative selected after reviewing specific situation.

Safety precaution:

In case of treatment do not enter space for 4 hours after (unless stated otherwise) – resp. until the treatment chemical has dried.

No limitation in case of gel application

Instructions after procedure:

- Do not use (normal retail) anti insect sprays.
- Keep open spaces clean – be careful especially around possible sources of food.
- Fill up, block off, insulate piping, crevices, small openings etc.

2. Procedure: in third or sixth week after first. Monitoring earliest after 4 weeks. Checkup recommended after 6-8 weeks.

Guarantee: After second treatment for **3 months**. Guarantee is extended from possible additional treatments, guarantee applicable only if second treatment occurs during 3-6 week period. Not applicable, if space is not prepared as per instructions above.

5) **German Wasp (*Paravespula germanica*)**

Biology:

Similar to the common wasp. Its body has yellow-black bands and is 1,6 cm long. Small discoloration occurs around the front shield and buttocks. Transition between torso and buttocks is strongly narrowed. Has a stinger with a poisonous sack. Unlike bees can strike repeatedly, since their stinger does not have so-called sting hooks. Wasps live in colonies with up to 5000 individuals, which collapse in autumn and workers die. Winter is survived solely by impregnated young females – queens. Queens begin in spring with building a nest, into which it lays eggs, from which larvae hatch after 7-10 days. These cocoon after 1-2 weeks and after 1-2 weeks finish their development into adult workers. Development from egg to adult takes approximately 3-5 weeks. After the first workers develop the Queen stops taking care of the nest and devotes herself to solely laying eggs. Workers are unable to lay eggs. In autumn, males and females hatch from the eggs which mate. Winter is survived by young females.

Preparation for procedure:

Essential to locate nest, alt. spaces through which they enter the building!

Procedure:

- A) Nest in cavity – pressure application of insecticide spray into fly in-out space.
- B) Nest dome – spraying of whole nest with insecticide, then puncturing wall and application of insecticide inside nest. After wasps die, the nest is mechanically removed.

Safety precautions:

- **Entry into treated space only after treatment has dried.**
- **Beware of dying wasps around nest! For 24 hours after elimination wasps can try to return to the nest.**

Instructions after procedure:

Beware of insects returning for next 24 hours!

Guarantee: 100% after first treatment

6) European Hornet (*Vespa crabro*)

Biology:

Body is yellow-black striped, around 2-4 cm in length, with a pair of wings. The transition between the torso and buttocks is strongly narrowed. It has a stinger with a poisonous sack. Unlike bees Hornets can sting repeatedly because they do not have so called sting hooks. Hornets live in colonies, which can reach up to 1200 individuals. The colonies collapse during the autumn and the hornets die. Only young fertile females survive the winter – queens. The queens begin building nests in the spring, into which they lay eggs. These hatch after 7-10 days. After 1-2 weeks they cocoon, and after 1-2 weeks these develop into adult workers. The development from egg to adult takes around 3-5 weeks. After hatching the first workers the queen stops taking care of the nest and devotes herself to solely laying eggs. In the autumn males and females hatch and mate. The winter is survived by fertile young females only.

Preparation for procedure:

Essential to locate nest, alt. spaces through which they enter the building!

Procedure:

- A) Nest in cavity – pressure application of insecticide spray into fly in-out space.
- B) Nest dome – spraying of whole nest with insecticide, then puncturing wall and application of insecticide inside nest. After wasps die, the nest is mechanically removed.

Safety precautions:

- **Entering the treated space until the chemical has dried.**
- **Beware of dying hornets around the nest!**
- **For 24 hours Hornets might be returning to nest.**

- **No other special precautions.**

Instructions after procedure:

Beware of insects returning for next 24 hours!

Guarantee: 100% after first treatment