

# DEET DEFENSE

(EFFECTIVE BUG SPRAY)

## INTRODUCTION:

DEET Defense is a gentle and safer insect repellent spray specifically designed to protect against a variety of pests, including mosquitoes, ticks, gnats, biting flies, chiggers, and fleas. Our formula harnesses the well-known, highly effective, and safe repellent properties of DEET (chemical name: N,N-diethyl-meta-toluamide), ensuring maximum protection for you and your loved ones indoors and outdoors all night long.

## COMPOSITION:

Component	Content (% w/w)
N,N-diethyl-meta-toluamide	: 25.00
Adjuvants and carrier	: 75.00

## BIOLOGICAL PROPERTIES:

### Mode of action:

#### 1. Olfactory Disruption:

- **Inhibiting Scent Detection:** DEET Defense disrupts the ability of insects to detect host odors, particularly those emanating from human skin, such as lactic acid and carbon dioxide. DEET interferes with the insects' olfactory receptors, confusing their sense of smell and making it difficult for them to locate their targets.
- **Vapor Barrier:** When applied, DEET forms a vapor barrier on the skin, which acts to confuse and overwhelm the insects' sensory neurons. This barrier masks the scents that attract insects, effectively making the user "invisible" to these pests.

#### 2. Behavioral Avoidance:

- **Repellent Surface:** Insects tend to avoid surfaces treated with DEET Defense. DEET affects specific neurons in the insects' antennae and mouthparts, triggering a behavioral response that causes them to steer clear of treated areas.
- **Reduced Landing:** DEET Defense deters insects from landing on or biting treated skin and clothing. This is crucial for preventing bites and the potential transmission of insect-borne diseases.

### 3. Neuronal Impact:

- **Direct Neuronal Inhibition:** DEET directly affects the neurons in the insects' olfactory system. For example, it blocks neurons that respond to 1-octen-3-ol, a compound found in human breath and sweat, thereby reducing the insects' ability to sense and approach their prey.

### 4. Multifunctional Mechanism:

- **Combined Effects:** The effectiveness of DEET Defense is due to its ability to employ multiple repellent strategies simultaneously. By both masking human scents and creating an unpleasant surface for insects, DEET Defense provides robust protection against bites.

#### KEY FEATURES:

- **Highly Effective:** Proven to repel mosquitoes, ticks, gnats, biting flies, chiggers, and fleas.
- **Safe for Humans and Pets:** Formulated for safe use on both human skin and pets, making it versatile and convenient for family use.
- **Gentle Formula:** Designed to be gentle on skin while providing robust protection.
- **Worry-Free Sleep:** Enjoy a worry-free sleep all night long with reliable insect protection.

#### BENEFITS:

- **Long-Lasting Protection:** Provides enduring protection, allowing you to stay worry-free both indoors and outdoors.
- **Versatile Use:** Ideal for camping, hiking, picnics, and any outdoor activities, as well as for everyday use.
- **Peace of Mind:** Feel secure knowing you and your pets are protected by a trusted repellent.

#### HOW TO USE:

1. Shake well before use.
2. Apply evenly to all exposed skin and clothing.

3. For use on pets, lightly mist their fur while avoiding their eyes, nose, and mouth.
4. Reapply as needed, especially after swimming, sweating, or extended outdoor activity.

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