

Mosquito repellent



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INTRODUCTION

Mosquito Repellent is the product which protects mainly human beings from the deadly mosquitoes. Before proceeding about the mosquito repellent and about its usage and all, let us first analyze what is mosquito and repellent.

Mosquito is a common flying insect that is found around the world. There are about 3, 500 species of mosquitoes. They have a pair of scaled wings, a pair of halteres, a slender body, and six long legs. The females of most mosquito species suck blood from other animals, which has made them the deadliest disease vector known, killing millions of people over thousands of years and continuing to kill millions per year by the spread of infectious diseases.

Repellent is a substance applied to skin, clothing or other surfaces which discourages insects from landing or climbing on that surface mainly human beings. There are so many different kinds of mosquito repellents are available in the market which helps in protecting human beings from deadly infectious diseases.

Mosquito Development Process:

Mosquitoes go through four stages in their life cycle: egg, larva, pupa, and adult or imago. The first three stages are aquatic and last 5-14 days, depending on the species and the ambient temperature. The adult females can live up to a month (or more in captivity) but most probably do not live more than 1-2 weeks in nature.

After drinking blood, adult females can lay a raft of 50-300 eggs per oviposition. Anopheles, Ochlerotatus and Aedes, as well as many other genera, do not make egg rafts but lay eggs singly. Culex, Culiseta, and

Anopheles lay eggs directly on the water surface and *Anopheles* are unique in having floats on either side. Eggs are not resistant to drying and hatch within 2–3 days, although hatching may take up to 2–3 weeks in colder climates. In other mosquitos such as *Aedes*, the female lays her eggs on damp soil that will be flooded by water, typically near a stagnant pool. However, any open container containing water will suffice for larvae development, even with less than 30 ml (one fluid ounce) of water in. *Aedes* can also breed in running water, so stagnant pools of water are not its only breeding sites. With *Haemagogus*, the adults tend to live in the canopy of forests; the female lays eggs in between layers of tree bark or in cut bamboo. The eggs adhere to the surface and when submerged by rain water quickly develop into larva.

The duration from egg to adult varies considerably among species and is strongly influenced by ambient temperature. Mosquitoes can develop from egg to adult in as little as 5 days but usually take 10–14 days in tropical conditions. The variation of the body size in adult mosquitoes depends on the density of the larval population and food supply within the breeding water.

Adult flying mosquitoes frequently rest in grass, shrubbery or other foliage.

Mosquitoes Diseases

Mosquitoes are a vector agent that carries disease-causing viruses and parasites from person to person without catching the disease themselves.

Mosquitoes are estimated to transmit disease to more than 700 million people annually in Africa, South America, Central America, Mexico and much of Asia with millions of resulting deaths.

Methods used to prevent the spread of disease, or to protect individuals in areas where disease is endemic include Vector control aimed at mosquito eradication, disease prevention, using prophylactic drugs and developing vaccines and prevention of mosquito bites, with insecticides, nets and repellents. Since most such diseases are carried by “elderly” females, scientists have suggested focusing on these to avoid the evolution of resistance.

“Everybody knows about the problems caused by mosquitoes.” Different kinds of diseases are spread by mosquitoes. Some viral diseases are chikungunya, dengue fever and serious disease such as malaria are spread by mosquitoes even if we are not bothered with these diseases its very irritating experience, with mosquitoes biting here and there. To get rid of these problems we are using mosquito repellents.

DIFFERENT TYPES OF MOSQUITO REPELLENTS

There are so many different types of repellents are available in the market. All these repellents help us to protect from different types of mosquitoes to come nearby us and spread various diseases. The various forms of repellent are as follows:

- COIL
- LIQUID
- MAT

- SPRAY
- CREAM
- MESH NET
- ELECTRICAL BATS AND
- OTHERS.

In most of the Asian countries such as India, Pakistan, srilanka and others, use mostly the traditional coil to the large effect. Slowly, the shift has been seen drifting from coil to other forms of mosquito repellents such as mosquito mats, liquids, and spray although the coil still dominates the sales chart.

Potential market for Mosquito Repellent

In Indian market there is always a high potential market value for mosquito repellent because of large number of diseases are caused due to the mosquito biting. Earlier people use to get satisfied without using mosquito repellent to protect themselves from fatal mosquitoes but now with the development taking place everywhere, people have realized that it is better to choose mosquito repellents than going for medical treatment for various diseases such as malaria, dengue, HIV etc.

Mostly in developing and underdeveloped countries, mosquitoes are the main concern for millions of people living in these countries because countries such as India who is still developing has a lot of work to cover such as pit, dug, poor sewerage, open drainages, untidy surroundings, not properly cleaned atmosphere, road side dusty locations, where people does not bother to throw or spit anywhere in the world are the concerns which let mosquitoes take birth and grow to irritate and cause so many fatal diseases.

Keeping all these aspects in mind, one can easily analyze how potential the mosquito repellent in Indian market is. The best thing is it is easily available at almost all the shop and its cost is also very low depending on the products starting from Rs 1. 50 onwards.

Usage of Mosquito Repellent Customers in Indian Market

With over 255 species of mosquitoes, who are responsible for spreading diseases such as malaria and dengue fever? India has a large and growing market for mosquito repellents. Many methods are used in households for dealing with the mosquito menace. In spite of the pervasiveness of the mosquito problem, the use of repellents in India is fairly low. It is estimated that only 16. 4% of the households in all urban areas and 22. 6% in the metros use mosquito repellents. The figure for the rural areas is even lower, at only 6. 9%. In terms of value, the mat segment was the largest (51%), followed by coils (21%) and vaporizers (7%).

Coils were the first mosquito repellents to be introduced in the Indian market. The first brand of coils was Tortoise, launched by Bombay Chemicals Ltd. (BCL) in the 1970s. Until 1994, Tortoise remained the market leader in its segment, with a 67% market share.

Different Types Of Mosquito Repellent Brands Available In Indian Market

- Godrej Sara Lee Ltd.
- Reckitt Benckiser Ltd.
- Balsara Pvt Ltd.
- Karamchand Appliances Pvt Ltd.
- Miracle Cosmetic Product.
- Baygon

- Bombay Chemicals Ltd etc.

Famous Brands available in Indian Market

Godrej Sara Lee Ltd:

Godrej Sara Lee is a joint venture company between the Godrej Group, India and Sara Lee Corporation, USA. They are the world's largest manufacturers of home insecticides.

This company is committed to the research and manufacture of quality household insecticides, and holds a substantial market share in the domestic market, with some of the most popular brands like GoodKnight, Jet, Hit and Banish, which have become generic with mosquito repellants today.

With values and traditions that stem from the principles on which the foundations of two great conglomerates, Godrej and Sara Lee, were laid, they are able to offer world-class products and services to the Indian and global consumer.

Reckitt Benckiser: sells its products in 180 countries and has operations in 60 countries across all continents.

Balsara Home products: has introduced Odomos Mosquito Repellent Lotion. It is a unique mosquito repellent with a lovely lingering perfume. The soft, mild and completely safe lotion can be used even on a baby's tender skin. It is available in easy to use flip top bottle, keeps your skin soft and free from mosquitoes.

Karamchand Appliances Private Limited (KAPL): is perhaps not a familiar name for the average Indian consumer. However, KAPL's brand ' All Out' is

very well-known. In fact, the name All Out is almost a generic name for Liquid Vaporizers (vaporizers), a segment of the Rs 4 billion¹(in 1999) mosquito repellent industry in India. KAPL was almost solely responsible for creating this segment. Within a decade of its launch, All Out had converted a large number of customers into vaporizer users, and had also established itself as the market leader in the segment, with a 69 percent market share in 1999. The success of KAPL is particularly noteworthy, considering the fact that it was a small family-owned company that managed to wrest market share from corporate giants such as Godrej Sara Lee Ltd (GSSL) and Hindustan Lever Ltd. (HLL) with strong, established brands such as Good Knight, Jet, Tortoise, Baygon and Mortein, amidst stiff competition.

Miracle Cosmetic products: have introduced Net Mosquito Coil in Andhra Pradesh and it is rapidly developing as a national product. Customers have accepted the new brand which is able to satisfy the customers to protect from fatalmosquitoes. They offer different kinds of mosquito coil such as small size green color round shape coil, large size red color round shape coil, hexagon type coil as well and many other such as family pack which consists of 30 coils in one box.

I describe here Net Mosquito coil, though all coils are basically same with same ingredients and similar packing with similar action.

«« WHY NET PLUS MOSQUITO COIL REFERRED? »»»

Jet and Mortein coils are definitely the most preferred brand that has high recall value and highly loyal customers. But with such homogenous products, I wanted to try other products to kind of test its efficacy. One such upcoming <https://assignbuster.com/mosquito-repellent/>

brand was NET PLUS by MIRACLE COSMETIC PRODUCTS. I liked their advertisements that pictured hungry mosquitoes on the cover of the coil box that were frustrated and fallen down by the effect of lit Net Plus coil. It appealed a lot to my sadistic mind. « THE PACKING »»

it comes in a square box with black and red colors. It has a picture of an inverted dead mosquito – zapped by a lightning, within which the words “ NET PLUS” in Big Bold red and blue color followed by the words strikes even hidden mosquitoes” are printed. The pack with 12 coils has a price of Rs 22 MRP. On backside, is a huge white and yellow rhombus with words “ POISON” written? Besides there is a mention of chemicals used. Unlike Odomos, the instructions to use the coils are on the packing. The leaflet inside is a tiny piece of paper and it has instructions of usage, Precautions to be taken and First Aid and Antidotes if ingested. But this is crammed in 3 languages in a font letters. The coils come in plastic bag within and a coil stand. The coils come in 6 groups of two, and separating these coils without breaking them requires special skills. «« THE COILS »» unlike most other coils that are green in color, Net Plus has reddish brown color, which stands out as unique.

Another aspect is that while others smell bad, this one has a pleasant smell.

Also after burning, while other coils tend to suffocate the users, Net Plus coils surprisingly are not suffocating but on the contrary smell good. Another striking feature is that while Tortoise, Odomos etc burn faster, this one burns slowly and steadily, staying for nearly 10 hours, making it the most effective coil available. Moreover the smoke spreads fairly in the room creating virtually a wider mosquito free zone. Chemicals used while most other coils use Allethrin (0. 2% w/w), this one uses a slight variant the d-trans Allethrin

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(0.1% w/w) which is more toxic to insects. Allethrin is a pyrethroid, a synthetic compound that has stomach and respiratory action and paralyzes insects before killing them. I have seen a mosquito that had fallen on the floor literally struggling to survive and then lying still, struggling again and so on and ultimately fall to its side with legs twitching and then die. Allethrin is also toxic to humans and should be kept out of reach of children. It should not be stored in kitchen. Every time one uses it, he/she should wash hands with soap. «« USAGE»» The coil is spiral. The center has a notch and has can be fixed to a sharp pointed edge of coil stand. This stand has a groove where broken coils can be attached. We burn the coil and then place it in the center of the room, under a fan, in the evenings, and with window in open condition for ventilation and to drive away mosquitoes while ensuring that outside ones don't risk coming in. I would advise keep this arrangement in a plate or tray so as to collect the ash that remains after burning the coil «« OVERALL »». If you have to use a coil, I highly recommend you to try Net Plus coils. I am sure you won't be disappointed. I see only the new Herbal Tortoise coils that claim to be safer for children as the sole competitor.

Repellent Side Effects

12% of people who are using regularly mosquito coils are prone to serious diseases. Allergy is also common among them. Most of the coils which emit smoke contain a very harmful pesticide called DDT. DDT is a highly poisons substance which has to be eradicated from earth itself. Pyrethrum, allethrin is some of the substances which are contained in mosquito coils.

Pyrethrum produced is highly harmful to human beings and leads to respiratory diseases. The allethrin which is contained in mosquito coils can

affect the brain growth of children. It is strictly advised that pregnant ladies should not use mosquito coils. Mosquito coils and insecticides are to be avoided strictly. But because of this we cannot bear the mosquito bite. Here are some safety measures which we can implement at home. The ventilations and doors can be provided with nets inside the house. This will prevent mosquitoes to enter the house. Provide your bed with a mosquito net during evening or specially while sleeping time.

It's better to use lotions to avoid mosquitoes than mosquito coils. It's very important to be aware of these facts and we should try our level best to help our family and friends to lead a healthy lifestyle. Mosquitoes are estimated to transmit disease to more than 700 million people annually in Africa, South America, Central America, Mexico and much of Asia with millions of resulting deaths.

The best way to eliminate all mosquitoes is to find their leader and bite it. Ridiculous as it may sound but this is what a kid came up with when we questioned them during one of our " awareness drive" in the last year.

Well, on a more serious tone, best way is to kill their larvae by means of adding chemicals and toxics in puddles and non-flowing stagnant water. Though we would leave this act to Pest Control or Municipal Corporation (in my case), what we could do at our end is to keep our surroundings clean and tell others around to do the same. Yet, however much we try; these pesky warriors come in throng and attack us while we are sleeping. We may be quick to squash a few of them with our hands, but that leaves our hands dirty with blood stains and is definitely not a wise solution. and besides, what

if we go out on camps or to some other locality, say, a hostel. What then?

The answer is coils. I remember my grandmother burn the fibrous remains of a coconut in a vessel in the evening hours when the mosquitoes wake up for their breakfast. The result would be a smoky house but yes, it would definitely choke the mosquitoes away. But it would also suffocate us. The mosquito coils are built on a similar concept.

Tortoise was the first brand that introduced such coils in India and is still quite a famous household name. It does have some competition from Mortein, Jet, and Odomos (famous for skin ointment) and now miracle cosmetic products have introduced into the mosquito repellent industry.

DATA ANALYSIS

Facts and Figures about Malaria, Dengue, Yellow fever

Do you know, that...

- 40 million people suffer from mosquito diseases annually in India.
- 2 million cases of malaria alone are reported in India.
- India spends around 100 million dollars on malaria.
- Malaria, dengue and yellow fever are the result of low hygiene & sanitation and poor insect control.

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PRECAUTIONS

Firstly you shouldn't allow water to stagnate, as this forms a breeding ground for malaria's deadly carriers, the anopheles mosquitoes. At community level, water shouldn't be allowed to stagnate and all such site should be drained, covered with DDT. At home, you should change water in flowerpots, buckets, coolers etc at least twice a week. Mosquito nets and door screens also help. While these methods are useful they are neither convenient nor useful. Mosquito repellants like mats, coils, refills, etc should be regularly used to keep mosquitoes away.

Dengue Fever is an acute infectious viral disease usually affecting infants and young children. It is characterized by fever during the initial phase and other symptoms like headache, pain in the eye, joint pain and muscle pain, followed by signs of bleeding such as red tiny spots on the skin, nosebleed and gum-bleed. If there is blood in the stools and/or blood in the vomit and accompanied by shock, this is called Dengue Shock Syndrome and is often fatal. Aedes, Aegypti, the transmitter of the disease is a day-biting mosquito that lays eggs in clear water containers, such as flower vases, cans, rain barrels, old rubber tires, etc. The adult mosquitoes rest in dark places of the house.

Regarding safety with insect repellent use on children and pregnant women:

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- Children may be at greater risk for adverse reactions to repellents, in part, because their exposure may be greater.
- Keep repellents out of the reach of children.
- Do not allow children to apply repellents to themselves.
- Use only small amounts of repellent on children.
- Do not apply repellents to the hands of young children because this may result in accidental eye contact or ingestion.
- Try to reduce the use of repellents by dressing children in long sleeves and long pants tucked into boots or socks whenever possible. Use netting over strollers, playpens, etc.
- As with chemical exposures in general, pregnant women should take care to avoid exposures to repellents when practical, as the fetus may be vulnerable.

Regardless of which repellent product used, it is recommended that the label is read before use and directions carefully followed. Usage instructions for repellents vary from country to country. Some insect repellents are not recommended for use on younger children.

Mosquito Preventive Measures

Some mosquito problems can be eliminated by local residents. This could possibly reduce the number of costly applications during the season, especially in a cooperative effort. The preventative measures are as follows:

- Clean and maintain catch basins that hold water.
- Collect and properly discard all useless artificial containers such as cans bottles and old tire casings etc.

- Cover or turn over other containers such as boats, barrels, tubs and tanks.
- Inspect and clean rain gutters and down spouts regularly
- Fill or drain low places where water may accumulate and stand for more than one week.
- Properly maintain backyard swimming pools.

Objectives of the study

- Study the customer's awareness and behavior after the usage of the product offered to him or her.
- To draw out the customer satisfaction levels.
- To build a good customer relationship.
- To take care necessary measure to improve goods and services offered to customer.
- To compare satisfaction of the company vis-à-vis major competitors.
- To minimize the side effects of the mosquito repellent as this is suffocating stuff.
- To develop such a strong brand of repellent as it will be helpful to protect from mosquitoes and reduce or minimize the diseases caused by the mosquitoes.

Customer satisfaction

A thorough understanding of the fast changing “ *consumer behavior*”, is the new market segments and product opportunities along with sensitivity to changing customer needs, form the core of Mosquito repellent marketing strategy and philosophy.

In India, we essentially have a completely “ customer-driven approach.” A nation-wide dealer network comprising of over thousands of dealers, franchise holders for mosquito repellent, ensures convenient access to the companies’ products across the country.

With a deep sense of belonging to the Mosquito repellent fraternity, the company’s dealer network has catalyzed growth and acted as a strong bridge between the customers and the companies.

The respective companies have undertaken a steady up gradation of technologies and methods, there has been diversifications and setting up of newer establishments to meet stringent international standards.

DELIVERING HIGH CUSTOMER VALUE

The key to generating high customer loyalty is to deliver high customer value. According to Michael Jose, in his delivering profitable value, a company must design a competitively superior value proposition aimed at a specific market segment, backed by a superior value delivery system. “ The value proposition consists of the whole cluster of benefits the company promises to deliver, it is more than the core positioning of the offering. For example, Volvo’s core positioning is “ safety “ but the buyer is promised more than just a safe car, other benefits include a long-lasting car, good service, and along warranty period. Basically, the value proposition is a statement about the resulting experience customers will gain from the companies’ market offering and from their relationship with the supplier. The brand must represent a promise about the total experience customers can expect. Whether the promise is kept depends on the company’s ability to

manage its value delivery system. The value delivery system includes all the experiences the customer will have on the way to obtaining and using the offering.

DEFINING CUSTOMER VALUE AND SATISFACTION

Over 38 years ago, Peter Ducker observed that a company's first task is to create customers, " however, customers face a vast array of product and brand choices, prices, and suppliers. How do they make their choices?

CUSTOMER PERCEIVED VALUE

Our premise is that customers will buy from the firm that they see as offering the highest perceived value. Customer's perceived value (CPV) is the difference between the prospective customers' evaluation of all the benefits and all the costs of an offering and the perceived alternatives. Total customer value is the perceived monetary value of the bundle of economic, functional, and psychological benefits customers expect from a given market offering. Total customer cost is the bundle of costs customers expect to incur in evaluating, obtaining, using, and disposing of the given market offering.

Delivering customer value and satisfaction

In a hyper competitive economy with increasingly rational buyers, a company can only win by creating and delivering superior value. This involves the following five capabilities: undemanding customer value: creating customer value, delivering customer value, capturing customer value, and sustaining customer value. To succeed, companies need to use the concepts of value chain and a value-delivery network.

Value chain

Michael Procter of Harvard university proposed the value chain as a tool for identifying ways to create more customer value _ is a synthesis of activities that are performed to design produce market, deliver, and support its product. The value chain identifies nice strategically relevant activities that create value and cost in a specific business. These nine value -creating activities.

These core business processes include:

The market sensing process: All the activities involved in gathering market intelligence, disseminating, in within the organization, and acting on the information.

The new offering realization process: All the activities involved in researching, developing, and launching new high-quality offerings quickly and within budget.

The customer acquisition process: All the activities involved in defining target markets and prospecting for new customers.

The customer relationship management process: All the activities involved in building deeper understanding, relationships, and offerings to individual customers.

The fulfillment management process: All the activities involved in receiving and approving orders, shipping the goods on time, and collecting payment.

SATISFYING CUSTOMER COMPLAINTS

Studies of customer dissatisfaction show that customers are dissatisfied with their purchases about 25% of the time but that only about 5% complaint.

The other 95% either feel complaining is not worth the effort, or they do not know how or to whom to complain.

Of the 5% who complain, only about 50% report a satisfactory problem resolution. Yet the need to resolve a customer problem in a satisfactory manner is critical. On an average, a satisfied customer tells three people about a good product experience, but the average dissatisfied customer gripes to 11 people. If each of them tells the other people, the number of people exposed to bad word of mouth may grow exponentially.

NEED FOR SURVEY

Need For Survey

“ The only job security to anybody in the company comes from quality, productivity and satisfied customers.” – Philip Kotler.

The above statement signifies the importance of the customer satisfaction for any business to become successful. This aspect gains the more significance with regard to.

NEEDS AND GOALS FOR CUSTOMER SATISFACTION

Most of the Marketers see the goal of Marketing as that maximizing not consumption but also customer satisfaction. Every company exists because the goods or services produced by the company should satisfy the needs of customers.

METHODS OF DATA COLLECTION

The basic method adopted in conducting the study is a structured questionnaire. Questionnaire is administered in the sample respondents.

However, there are certain cases where personal interactive method is followed with customer to find out the service satisfaction level.

CUSTOMER SATISFACTION

Many organizations have got a clue how the customers perceive the goods and services. Firstly, customer may buy a given products or services simply because there is no other option and they would prefer to purchase what you are offering them to go with out altogether.

Secondly, the fact that a product of services may be accepted does not mean that it will continue to sell. Competitors may see opportunity customer exceptions may change customer tastes may move on, if standard do not rise and products and services evolve, and then downwards sales will appear.

A worse situation arises when the organization has not got a clue of the customer's perceptions. Another situation is when the organization does not have a clue of their customer's perceptions and don't cares either the organization may believe that it is a monopoly situation and its customers cannot go elsewhere. Some organizations believe that it knows best that customers should want and therefore supply them with a centrally designed product.

If resultant product of services has deceits, then it is perceived to be a problem for the customers. Some organizations solicit customer feedback or <https://assignbuster.com/mosquito-repellent/>

get it anyway whether they like it or not and then do nothing about it.

Finally, we come to the point where we realize how important customer feedback in the case of an organization which helps the organizations to determine how effectively it is serving the customer and determine customer satisfaction? This feedback answers the following questions to find out.

- Who is our customer?
- When are they