



“Tell me and I forget, teach me and I may remember, involve me and I learn.” – Benjamin Franklin

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To learn more about how Nisus products can solve even the toughest pest issues while increasing your business profitability click on this link www.nisuscorp.com



————— **Better science for a better world.** —————

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We're Our Own Worst Enemy

"Our industry has survived and prospered despite the many challenges it has faced over the years. Today, it is as strong and vibrant as at any time in its history, providing the highest quality pest control service in the world."
— Norm Elumenn, Van Waters & Rogers

"Pest control is a noble profession. There is no other profession in the world that does what we do... not doctors, police, firemen, etc. We protect public health, property, and the environment EVERY DAY!"

PCT Magazine 2001

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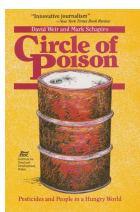
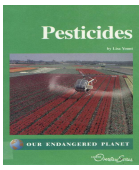
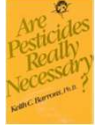



As a PMP your mission is not really to control pests or simply get your route done.

Your true responsibility & mission is a much bigger picture view even if you do not see it or feel it every day.

Protector of public health, property, and the environment

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PERCEPTION IS.... Thanks to Hollywood & Mainstream Media

Creative Commons.com

Arachnophobia - Hollywood Pictures

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PERCEPTION THEN BECOMES REALITY

No delineation of agriculture Vs structural pesticides. ALL pesticides are bad!

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LET'S CHANGE THE NARRATIVE

Consumers need to know rodent control IS disease suppression! Not just rodenticides.

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WHY DOES OUR INDUSTRY DO THIS?

- 1** PMPs sell the job off of the damage and diseases that are caused by pests.
- 2** We expertly eliminate the pests. And often add to it with exclusion services
- 3** Yet we leave behind the pathogens and disease risks?! The #1 reason why they called a PMP for service.

Ready to answer the call?
Pests and pathogens have nowhere to hide with **Steri-fab®** and **DSV™** on their trail. From soft surfaces to hard, they don't stand a chance against this dynamic duo.

Sell being a protector of public health and address the pathogens risks!

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**Do you ever use your teeth to open packaging?
Do you ever wipe down supermarket packaged items before handling or use?**

Rodent Urine.

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Did you ever barely make it after eating out at a restaurant?

Health departments RARELY IF EVER "peel back the onion" enough to put the blame on pests.

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"Pathogens thrive on inequality and injustice."
Pathogenesis: A History of the World in Eight Plagues by Jonathan Kennedy

The period at the end of a sentence is 1,000,000 nanometers wide.

That same sized space can contain over 5 million rodent pathogens.

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PATHOGENS & PESTS IS NOT A NEW SOCIETAL TREND OR FAD

Be Kind to Cockroaches

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Who tests positive to cockroach allergen?

- 17-41% of total population
- 41% of asthmatics
- 50% of minorities with asthma
- Cockroach allergies are **25% higher than peanut allergies**
- Cockroach allergies are **15% higher than cat allergies**
- Pollen & ragweed are **EQUAL TO** the same allergen levels in humans as cockroaches
- 12% of the population without any other allergies are sensitive to cockroach allergens.

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Date: Third National Health and Nutrition Examination Survey

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TRUE HEALTH RISK PESTS

▪ Rats, mice, flies, and cockroaches are considered **commensal** structural pests.


▪ In context, it means that these pests share our food, water, shelter, and space.

▪ Because of their close proximity to humans and pets, the risks of contact with pathogens are amplified.

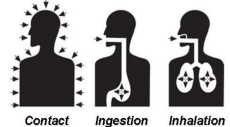
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MECHANICAL TRANSMISSION OF PATHOGENS



- Contact or dermal can be direct or passive.
 - Touching affected areas then touching your eyes, nose, and mouth.
 - Pathogens contacting an open cut or wound.
- Ingest contaminated food or liquid.
 - Bite fingernails, lick fingers, etc.
- Inhalation poses the greatest risk from pests.
 - Pathogens on dried urine and fecal matter become aerosolized
 - Sweeping or disturbing pest runways and harborage where urine and fecal matter has highest accumulation.
 - Vacuuming pest areas without a HEPA filter.
- Dogs are highly vulnerable to zoonotic pathogens and can transmit diseases to humans.
 - Recovered dogs can be contagious for months!
 - They sniff out harborage during walks.
 - If they dig at burrows, they aerosolize pathogens.
 - Puddles can be contaminated and they either drink from them or bite paws after walks.



Contact **Ingestion** **Inhalation**

Leptospirosis in Dogs AMC


Protect your dog -- and yourself -- from this potentially deadly disease

Affects multiple species
Leptospirosis is a bacterial disease that spreads through urine and can infect wildlife, farm animals, rodents, dogs, and humans.

Bacteria can survive in water or soil for weeks or months.
Dogs usually become infected by drinking, swimming, or walking through contaminated water.

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MOST FLY SPECIES ARE MECHANICAL VECTORS



Flies body and wings are covered with stiff hairs that allow filth (bacteria, viruses, fungi, parasites) to be transported and flung off onto surfaces as the fly cleans itself.


➤ **Researchers found flies:**

- Routinely carry over 200 pathogens.
- Carry over 350-600 bacterial strains.
- Can/do transmit over 65 diseases to humans & pets. More than any other insect!



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*The Process & Story **GUARANTEED** to make you hate flies too!*



The Fly

antenna (with lateral bristles)

eye

maxillary palps

labium

labellum

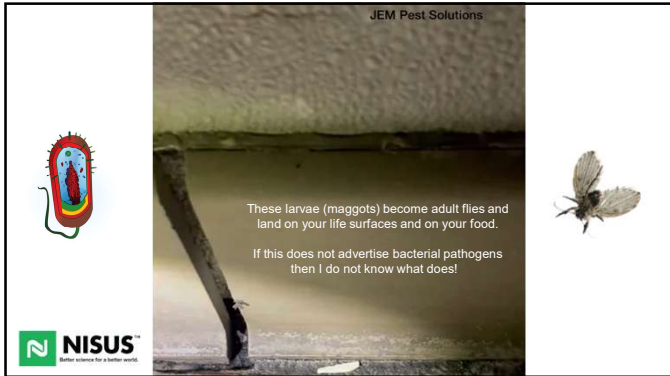
pseudotracheae

The Process

1. Fly on surface
2. LITTLE HOUSE FLY - EGGS
3. Fly on food

George Williams, ACE, PHE | NISUS

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"Groundbreaking! It is shocking and alarming given rodents close proximity to people and pets. This is a recipe for a public health nightmare."

EcoHealth Alliance (scientific organization that researches the links between human health & wildlife)

Dr. W. Ian Lipkin
 Pathogen Surveillance in NYC Rodents: Primary investigator on project to determine the microflora of rats & mice in proximity to densely populated and high traffic areas.

- 15 bacterial and protozoan pathogens in the 133 trapped rats.
- Identified 18 unknown species related to viruses already shown to cause diseases in humans. Two of the new species, were similar to the virus that causes hepatitis C.
- Seoul hantavirus, was present in eight rats... the first time the virus has been documented in the US.
- Leptospirosis is a disease caused by bacteria in the urine of infected rats. Infections often occur when people & pets contact the urine areas of infected rats. (Eg. Cambridge, MA 2015 - NYC 2021, 15 cases & 1 death)
- 37% (153/416) of mice harbored at least one potentially pathogenic bacterium.
- 23% of urban rodents have been linked to carriage of antibiotic-resistant bacteria, including *E. coli*.
- One mouse harbored five types of potentially pathogenic bacteria, while six mice each carried three different resistance genes.
- 36 different viruses were identified within the captured mice.

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Long Rodent

Dr Bobby Corrigan encouraged pest managers to 'think outside the box'

Long COVID = symptoms that can last weeks, months, or even years after infection.

We are dealing with "long rodent"

Rodents are reinfesting sites long after elimination has occurred. No more food or harborage yet they return weeks, months, perhaps years later. WHY? The odors left behind tell new rodents this was once a great place to live.

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INTERSPATIAL (*ĪN'TĒR-SPĀS'*)
To occupy a space between two things, an interval.

HOSPITAL

Doctor-nurse break room

Malls & other large very occupied public spaces

- HUGE rodent activity areas laden with pathogens
- HVAC jet diffusers blowing pathogens everywhere

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OPPORTUNITIES ARE WAITING FOR YOU

HEALTH THREATS TO FAMILY

Regarding the health of you and your family, which of the following pests would you say are the biggest threat?

Number of responses: 2,527; respondents could select more than one answer.

- Mice
- Rats
- Cockroaches
- Ticks
- Fleas
- Spiders
- Termites
- Insects
- Ants
- Squibbles, bats or other wildlife
- Somewhat else
- None of these

- A true protector of public health offering.
- Differentiate from competitors that do not offer service.
- Add sanitizing to your already existing fly services (bioremediation - ILT maintenance) for increased value to client.
- Higher account retention and referral opportunity.
- Another sales offering for sales reps to sell as an additional value-added offering and angle to close more sales.
- Restaurants cited for "vermin" not because they see rodents, but because they see their droppings. Cleaning & sanitizing these areas has huge value to this client base.
- Rodent cleanup fines are VERY real and in the sights of OSHA. Fines could cripple a business and lead to additional legal exposure via lawsuits.

OSHA fines Stratham's
 Just \$154K
 for rodent droppings

PCT Magazine

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LAWS IN MANY MAJOR CITIES ARE CHANGING TOWARD "WELLNESS ENVIRONMENTS"






Local Law 55
Asthma-Free Housing Act

- Local Law 55 allows tenants to hold their landlords accountable for pathogens.
- NYC buildings containing 3+ apartments must annually investigate & remove indoor allergen hazards in each residential unit.


What are Indoor Allergen Hazards?

As defined in Local Law 55, the term "indoor allergen hazard" means any indoor infestation of:

- Cockroaches
- Mice
- Rats
- Mold ("Indoor Mold Hazard")
- Conditions conducive to such infestations



Keep it Pest Free



Current **MAJOR** Societal Trend



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VALUE-BASED SALES METHODOLOGY

A SALES APPROACH THAT PRIORITIZES UNDERSTANDING A CUSTOMER'S NEEDS AND CHALLENGES, THEN DEMONSTRATING HOW A PRODUCT OR SERVICE CAN DIRECTLY SOLVE THOSE ISSUES AND PROVIDE SIGNIFICANT VALUE TO THEM, RATHER THAN SIMPLY HIGHLIGHTING FEATURES OR PRICE POINTS.

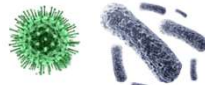
KEY ASPECTS	BENEFITS
<ul style="list-style-type: none"> Focus on benefits, not features Educate, not just sell Tailored value proposition Data-driven approach 	<ul style="list-style-type: none"> Stronger customer relationships Higher conversion rates Improved sales effectiveness Service that form partnerships

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KEY TERMINOLOGY *Talk The Talk*





- Disinfecting**
 - To clean something, especially with a chemical, in order to destroy bacteria.
- Sanitizing**
 - To make clean and hygienic, to disinfect.
 - Hygienic: Conducive to maintaining health, preventing or reducing disease, being clean or sanitary
- Bio-Sanitation**
 - A green cleaning method that uses microbes to reduce organic debris, eliminate odors, and improve sanitation. Also known as probiotic cleaning.
- F.O.G.**
 - Fat, Oil, Grease



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PROGRAM KEYS





Can add to existing customer base AND existing services.
** "Adding to" is a key profit center for PMPs **

Minimal additional investment in application equipment.


Higher margin "Add-On" service for the PMP.

Increased value-added offering results in better trust and positive reviews by clients.


"Protectors of the Public Health"

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SERVICE POSITIONING



- Determine positioning for the service; commercial-residential-wildlife
- Language matters, educate your team on;
 - Differences between Bio-Sanitation, Sanitizing and Disinfecting
- No different than what PMPs do for COVID disinfecting services or mosquito-tick programs.
 - You are not eliminating COVID threat
 - You are not eliminating Lyme Disease, Zika, WNV.
- You are suppressing or minimizing the risk, **NOT** eliminating it!
- Have a service agreement and/or overview statement to cover details and set customer expectations.
 - A "canned email" to client is a great tool.



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LOW-COST, HIGH-MARGIN ADD-ON SERVICE








Application frequency is based upon pest pressure and activity

In environments of constant pest pressures with moderate to high infestations, these areas should be serviced at least 2X per month.




If pressure reduces, maintenance can be monthly or quarterly, based on activity and desire by client.

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UPSELL & ADD VALUE TO COMMERCIAL FOOD ACCOUNTS



- Health inspectors write on reports (visible to public online) that there are "vermin" and "rodent droppings."
 - They don't see rodents just droppings. Past infestation? Been there for years?
 - They are **NOT** crawling under equipment to inspect!
 - They can't cite what they can't see!**
- DSV + HEPA vacuum
 - Charge extra
 - Increases service value to client
 - Reduces risk of brand damage & exposure for client

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PATHOGEN-BIOSANITATION SERVICES

WHAT DO I NEED?




1 Products

- Soft Surfaces Inside/Outside Non-Food Handling
- Hard Surfaces Inside Food Handling (non-prep areas)

2 Equipment

3 Support Literature, Service Agreement

ALWAYS READ AND FOLLOW ALL HANDLING, PPE REQUIREMENTS AND APPLICATION INSTRUCTIONS OF THE EPA LABEL BEFORE EACH USE

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PATHOGENS & PESTS PRODUCT TOOLBOX



Active Infestation

- DSV: Concentrated disinfectant, sanitizer, virucide, cleaner, mildewstat, & fungicide
- Used on hard non-porous surfaces (sanitizing claims)
- Labeled for residential, commercial, industrial, hospital, farm, and food handling areas (while in operation)
- Cleans and deodorizes

Active Infestation


- READY-TO-USE insecticide, disinfectant, sanitizer, virucide, cleaner, mildewstat, & fungicide
- Use on hard AND soft surfaces
- Can be applied to dermal contact surfaces, to include bedding and upholstery.
- Residential, commercial to include sensitive accounts (non-food handling areas)
- Non-residual contact kill that can be used for 2-in-1 treatment (knockdown + disinfecting)
- Cleans and deodorizes

Active + Maintenance

- Non-Pesticide, No EPA#
- Not pathogens BUT breaks down urine, odors, and organic matter.
- Enzymes replicate every 20min.
- 3 in 1 product (bioremediation for flies, odor control, pest harborage sites)
- Labeled for active infestation odors
- Rodent service maintenance add-on to enhance program value.

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DSV DEETS




- Used on hard non-porous surfaces (sanitizing claims)
- Kills over 50+ pathogens at label rates
- Labeled for residential, commercial, industrial, hospital, farm, and food handling areas (while in operation)
- Labeled for use in and around drains
- Cleans and deodorizes

Use	Dilution	Contact Time
For Bactericidal Hospital or Medical Environment Disinfectant claims	2 oz./gal. water	10 minutes
For General Bactericidal Disinfectant claims	2 oz./gal. water	10 minutes
For Public Health Virucidal* claims	3 oz./gal. water	10 minutes
**For Norovirus claims	6 oz./gal. water	10 minutes
**For Hantavirus claims	6 oz./gal. water	10 minutes
For Animal Virucidal* claims	3 oz./gal. water	10 minutes
**For Avian Infectious Bronchitis Virus claims	6 oz./gal. water	10 minutes
For Non-Food Contact Sanitizing claims	3 oz./gal. water	1 minute
For Fungicidal claims	4 oz./gal. water	10 minutes
For Mildewstatic claims	1.25 oz./gal. water	7 days




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BIO-SANITATION OF RODENT AREAS




It is highly effective at removing the sources of odors caused by living, dead and decaying animals and organic matter, such as after dead animal removal, during or after rodent and cockroach cleanouts, or that are caused by nuisance wildlife, kennels, bat or bird droppings, sewage, skunk odor, vomit and more.

- Seven fast-acting microbe strains that consume, not mask, organic matter (F+O-G).
- Immediately encapsulates and neutralizes the volatile compounds that cause odor while microbes continue breaking down matter, primarily urine runways.
 - Microbes double in population every 20min.
 - Extracellular enzymes are continually produced until matter is eliminated.
- Long-term solution to organic buildup in interior + exterior sites.
- Can be used for cockroach feces and nuisance wildlife cleanups.
- Can be applied at full strength or diluted (4-6oz to 1gal H2O)
- Add-on + recurring revenue for rodent programs:
 - You are now literally "spraying for rodents"
 - Adds GM\$ to service along with increased service retention due to value to customer.
 - Differentiates your service from competition.



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\$ SERVICE



MATERIALS	LABOR
<ul style="list-style-type: none"> DSV = \$41.00GAL (\$0.32oz) <ul style="list-style-type: none"> 3oz is most common rate; \$0.96 per finished gallon 6oz rate (hantavirus) is \$1.92 per finished gallon Steri-Fab = \$58.00 gal (RTU, \$0.45oz) <ul style="list-style-type: none"> Bed bug rate is 4-8oz per mattress, for general surfaces the rate should follow the same BacAzap liquid = \$41.00GAL (\$0.32oz) <ul style="list-style-type: none"> BacAzap liquid: 4-6oz/1GAL H2O dilution rate. 6oz is highest label rate other than concentrate & covers all needs. Material cost = \$1.28-\$1.92 per finished gallon BacAzap BOV is ideal for spot treating needs. While material costs are higher Vs liquid the labor time is 50% less. 	<ul style="list-style-type: none"> If an add-on to an existing service your labor is already factored into the primary service. If restaurant service is \$110.00 per visit (\$1.83 per service minute). 2X per month frequency <ul style="list-style-type: none"> 15min add-on service time = \$27.45 in labor costs HEPA vac + disinfecting can be done on each visit or 1X per month. Activity determines this. Labor + 10% (materials) formula is typically used <ul style="list-style-type: none"> \$27.45 + 10% = \$2.75 Add-on charge to customer = \$30.20 (round up to \$31.00) Residential services have a much higher hourly rate so many PMPs simply add a flat rate.

SERVICE PROFITABILITY ➡

- Restaurant: \$110 service to \$141 = 28.18 GM% increase
 - \$31 X 24 services = \$744 extra annually per account
 - Sell 20 accounts... \$744.00 X 20 = \$14,880
- Residential: \$325 to \$375 is a 15.4% increase
 - Sell 200 homeowners... \$50 X 200 = \$10,000

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RESTAURANT SERVICE LOGISTICS



- Health dept. rodent violations are based upon droppings detected. Removing them adds tremendous value to the client and overall service offering.
 - **STEP 1:** Sell the add-on service. Routine scope or additional visit. Drop ceilings?
 - **STEP 1-A:** Initial + routine service implemented. Frequency based upon infestation level.
 - Spray all dropping + runway areas w/DSV then HEPA Vacuum (Atrix) all visible droppings.
 - **STEP 2:** Routine maintenance, "spray for mice" in all runway areas with Bac-Azap to address odors-urine-FOG.
 - 6oz on 1st service visit. 4oz maintenance, 1X per month frequency.
- Food handling is DSV **not** Sterifab.
- Residential is same format. DSV or Sterifab + Bac-Azap based on surfaces being treated.
- Be sure scope of service is communicated via email and/or a service agreement.

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WHAT ABOUT LIABILITY & RISKS?



- You are not and cannot guarantee no risk from pathogens.
 - Like a COVID, flu, cold, etc. you cannot identify the who/what/where/when.
 - You treat the common runways & visible rodent activity areas. You cannot possibly know all of the activity areas as they are virtually invisible.
- Did you guarantee no COVID during your disinfecting services? Do you say there will be no Lyme disease, WNV, EEE with your mosquito-tick treatments?
- You absolutely should ensure your service is covered by your insurance provider just like other specialized services.
- You should have a service agreement or at least a disclaimer communication with the client about the scope of service.

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ADDITIONAL USES



Bird Dropping Cleanup & Ectoparasites



Nuisance Wildlife Attic Cleanup






Rodent Station Clearing / Re-Use



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REFERENCES | RESOURCES | DATA

Detection of Zoonotic Pathogens and Characterization of Novel Viruses Carried by Commensal *Rattus norvegicus* in NYC
<https://journals.asm.org/doi/10.1128/mbio.01933-14>

NYC House Mice (*Mus musculus*) as Potential Reservoirs for Pathogenic Bacteria and Antimicrobial Resistance Determinants
<https://journals.asm.org/doi/10.1128/mbio.00624-18>

Rodents as Hosts of Pathogens and Related Zoonotic Disease Risk
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7157691/>

AVMA: American Veterinary Medical Association - All dogs are at risk of leptospirosis
<https://www.avma.org/resources-tools/pet-owners/petcare/leptospirosis>

NYC Local Law 55 – Indoor Allergen Hazards from Mold & Pests
<https://www.nyc.gov/site/hpd/services-and-information/indoor-allergen-hazards-mold-and-pests.page>

HUD (Housing & Urban Development): Healthy Homes From Pests
<http://chrome-extension://efadnbnmmibpcapccgicdfndmkajhttps://files.hudexchange.info/resources/documents/Health-at-Home-High-Performance-Housing-Rehabilitation-Guidelines.pdf>

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Thank You!



NORTHEAST



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