

# Home Center

M A G A Z I N E

OCTOBER 1987

NEW DIY SOLUTIONS TO HOME  
AIR AND WATER POLLUTION

NEW PRODUCTS MAKE LAWN  
& GARDEN CHORES A SNAP

HERMAN DIAGNOSES THE 'NOT  
INVENTED HERE' SYNDROME

TRENDS: HARDWARE STORES  
CATCH A SECOND WIND



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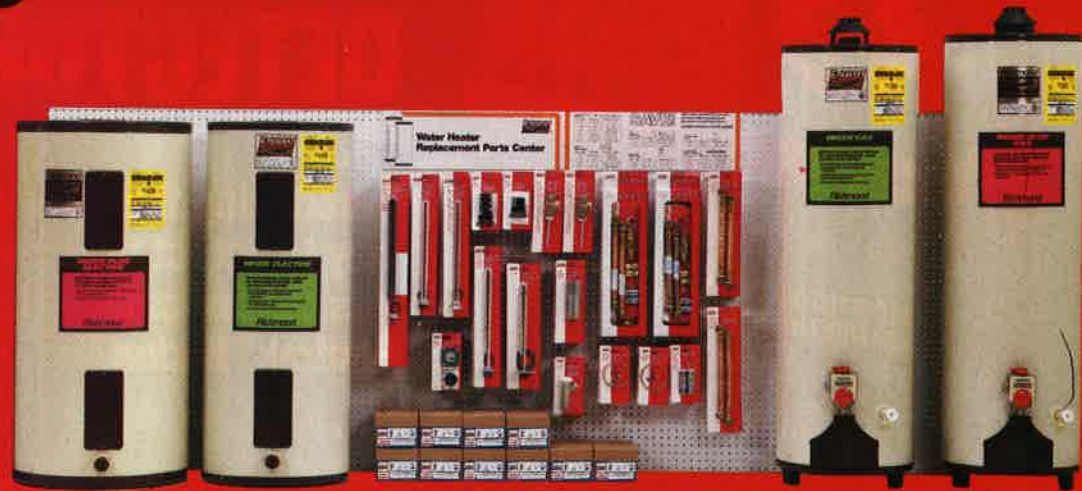
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CIRCLE 42

## HOME ENVIRONMENT PRODUCTS

Energy products arose from '70s oil shortages. Crime in the '80s spurred home security departments. Could pollution create sales in the '90s?

By Robert G. Wilson/Assistant Editor

One major assumption home owners make is that even in a world of muggers, deadly viruses and unbreathable air, they'll be safe and secure within the four walls they call home.

Just to make sure, they can buy disinfectants, deadbolt locks, smoke alarms and dogs with big teeth to turn home sweet home into home safe home. But none of these purchases would have protected the residents of Love Canal from the toxic waste in their soil, or the thousands of home owners nationwide who die each year from cancer caused by radon gas.

In a growing number of households, the threat to family safety isn't a burglar trying to break in, but a toxin invited in by a turn of a faucet handle, radon that creeps in unnoticed through hairline foundation cracks, gas expelled from construction materials, or airborne particles carried indoors by a spring breeze.

Just as home center retailers responded to the energy shortage by bringing insulation out of the warehouse and onto store shelves, pollution concerns in decades to come may require making room for products that can help home owners feel safe in their castles once again.

### H<sub>2</sub>O that's unfit to drink

Until shaken by revelations of contaminants in their water supply, many home owners simply assume their municipal treatment plants somehow magically extract untainted water from polluted lakes, rivers and underground aquifers.

A recent study of more than 60,000 water sources showed mixed trends in water quality. The study, published in *Science* magazine, showed that arsenic and cadmium levels increased between 1974 to 1981, especially in the Midwest. Also found were higher levels of nitrate and chloride. On the positive side, there were lower levels of lead and fecal bacteria.

Some cities are more at risk than others but none is immune from problems. For example, nearly every state has a toxic waste site that authorities are unable to clean up. Nationwide, there are about 1,500 waste sites; some states have more

than 100 closed dumps. But the tallest fences and sharpest barbed wire can't contain wastes that have infiltrated groundwater supplies. At special risk are such cities as Miami, Tucson and Memphis, which draw upon underground water supplies.

Unfortunately, municipalities can only do so much to decontaminate their water supplies at taxpayer expense. Sometimes, the treatments themselves become contaminants. Chlorine used to kill bacteria in the water can turn into toxic trihalomethane, for example.

When health officials begin finding toxins in the tap water, the news is like an unsolicited advertisement for residential water treatment products.

"In Long Island, they had a lot of water problems," said Brian A. Lipner, executive vice president of Omni Corp., Hammond, Ind., a manufacturer of home water treatment equipment. "We noticed a big jump in sales because people became aware of what was going on."

"Point-of-use treatment is where we're going," Lipner said. "The category is maturing very fast."

Home water treatment products can be divided into whole-house water filters that treat all the water entering a residence, under-the-sink models for treating water at a single faucet, and such specialty products as ice maker or recreational vehicle water filters.

Whole-house or under-the-sink filters can perform a number of duties, depending upon the filter cartridges used. One filter can be fitted with a cartridge to control sediment, or one to control taste, odor and chemical contaminants. The most common filtering agent is activated carbon.

For more money, a home owner can buy treatment equipment that cleans water by reverse osmosis—passing water through a membrane that acts as a screen—or by distillation.

Thanks to advertising, the most widely recognized type of filter is the one that attaches to faucets. There are mixed feelings about these products in the water treatment industry. These filters, available



Ametek created this merchandiser showing filter applications.



Omni's display stresses the do-it-yourself message.

RADON RISK EVALUATION CHART				
pCi/l	WL	Estimated number of lung cancer deaths due to radon exposure (out of 1000)	Comparable exposure levels	Comparable risk
200	1	440-770	1000 times average outdoor level	More than 60 times non-smoker risk 4 pack-a-day smoker
100	0.5	270-630	100 times average indoor level	20,000 chest x-rays per year
40	0.2	120-380	100 times average outdoor level	2 pack-a-day smoker
20	0.1	60-210	10 times average indoor level	1 pack-a-day smoker
10	0.05	30-120	10 times average outdoor level	5 times non-smoker risk
4	0.02	13-50	10 times average outdoor level	200 chest x-rays per year
2	0.01	7-30	Average indoor level	Non-smoker risk of dying from lung cancer
1	0.005	3-13	Average indoor level	20 chest x-rays per year
0.2	0.001	1-3	Average outdoor level	

**POLLUTANTS SUCH AS THESE ARE MORE OF A PROBLEM IN TODAY'S TIGHTER HOUSES**

POLLUTANT	SOURCES	HEALTH EFFECTS
Coarse particles	tracked-in dirt, vacuuming, dusting	eye and respiratory irritation, respiratory function impairment, allergic/infectious diseases
Environmental tobacco smoke	smoking	eye and respiratory irritation, respiratory function impairment, developmental effects, cancer, organ damage, allergic/infectious diseases
Animal dander	human activity, pets	respiratory irritation, allergic/infectious diseases, immune effects
Bacteria, viruses	human activity, pets, water, outdoor air, heating/air conditioning	Legionnaire's disease, pneumonitis
Fabric fibers	materials, furnishings	respiratory irritation, allergic/infectious diseases
Radon	soil, rock, drinking water	cancer
Kerosene, mineral spirits	auto products, pesticides, solvents, combustion fuel, hobbies, paint supplies	neurotoxicity
Polyvinyl chloride	building materials	liver and kidney damage, cancer

Source: U.S. EPA

at discount and department stores, are widely denounced as inefficient because the water they process is not in contact with the filter long enough to be significantly treated. But these cheap, easily installed filters do make consumers aware they should be doing something to safeguard the quality of their drinking water.

**"Greatest industry in the world"**

Euro-design faucets aren't the only fashion-driven items in the plumbing department. Health is in and pollution-free water is part of that health image.

"Everyone has stopped smoking and started running. This is becoming a very health-conscious nation," said Rod Chambers, plumbing sales manager for Ametek Plymouth Products, Sheboygan, Wis.

"Everyone is looking at water," Chambers said. "This is the greatest industry in the world to be in today because the government can't do any more to clean the water. The answer is point-of-use filters."

That's reflected in the water treatment equipment industry, which has prospered in recent years. It's a change from the days when filter makers dealt almost exclusively with plumbing supply companies and retailers ignored the category.

"The wholesale houses would say they didn't get any call for water filters," Chambers said. "Now, it's 'Let's talk.'"

The increased interest from retailers has placed a new burden on manufacturers—that of merchandising. Makers are coming out with new packaging and displays designed to catch consumers' attention and sell the do-it-yourself potential of these products.

Not all of this merchandising attention has been for the best, though. A problem in the industry today, Chambers warns, is "loose talk" from manufacturers making claims about what their products will do. For example, activated carbon filters won't eliminate bacteria from water. Some studies suggest such filters actually breed more bacteria, which feed on organic material filtered from the water.

Often there are mix-ups in filtration terms. Ed Knauf, Ametek marketing director, calls his products "filters" or "treatment devices." A water purifier is different because it eliminates bacteria. A distiller is yet another type of treatment product. Then there are water conditioners, which remove minerals from water. Filters are not a substitute for water conditioners.

For the benefit of do-it-yourselfers, companies are doing more to eliminate confusion by packaging their products in colorful, self-selling cartons along with the accessories to let home owners handle installation. A sign of how far water filter merchandising has come was a first-place award recently given to Ametek by the American Hardware Manufacturers Assn.

for Ametek's filter carton design.

Knauf said a home center can build a filter display around as few as five SKUs.

"You need an under-the-sink filter. You'd probably want a whole-house filter and they have two different connections. Then you'd want a carbon cartridge and a sediment cartridge," Knauf said. The inventory can be built up from there.

"Most retailers would also want to stock an ice maker filter that attaches to the line going to the refrigerator ice maker," Knauf said. "You could go up from there with other types of carbon and sediment cartridges and bigger or smaller filters."

"I think water filters are a decent margin item," Knauf said. "The key for a retailer having a line of filters is that the customer will come back every six to 12 months to buy a replacement cartridge. Customers normally buy replacement cartridges where they bought the unit."

Although filter sales have not exactly skyrocketed, the industry has enjoyed more rapid sales growth in recent years.

"We don't have any good industry figures, but I'd certainly think growth has been in the 15 to 20 percent a year range," Knauf said. "It could be even higher."

"A lot of filters are sold by word-of-mouth. Many warranty cards come back here marked 'recommendation of a friend,'" Knauf said. "I think a lot of filters are sold because the neighbor has one. He says he gets a better scotch and water or better coffee, so the next guy goes out and buys one."

**High-tech toxins**

Living and working in California's Silicon Valley can be a mixed blessing. A side effect of prosperity has been exotic toxins that have filtered through the soil and into the region's drinking water, prompting many professional people to research and buy the latest in water treatment equipment. One of their stops has been Orchard Supply Hardware in San Jose.

"We've been carrying water filters as a general category for about 15 years," said Bob Lewis, vice president and general merchandise manager.

"They were originally just sediment filters and taste and odor types of filters. Over the last couple of years, with all the concern over pollutants dissolved in the water, we've gotten into a chemical contaminant filter that's done quite well for us. We're in the process of introducing a reverse osmosis filter."

Lewis said chemical contaminant filters retail for about \$160. Reverse osmosis filters are in the neighborhood of \$300, whereas basic sediment or carbon filters are as low as \$16 to \$18.

"There's been a lot of consumer awareness on the subject of what they're drinking," Lewis said. "We're right in the heart

of the Silicon Valley and there are some areas that have had some pretty heavy drinking water contamination from high-tech firms. That's gotten a lot of coverage in the newspapers, so some people have a heightened awareness of what they're drinking.

"It's a combination of things. People are reading about problems in the newspaper that are sometimes occurring near their homes," Lewis said. "They feel that although the drinking water is supposedly safe, do they really want to believe and trust what they're being told?"

"In fact, what you're seeing in our area is a number of little water shops. All they sell is drinking water purification equipment," Lewis said. "Just recently, we got into our own private label drinking water and that's been extremely successful."

Although many customers enter the store knowing what they want, explaining the different treatment processes, benefits and installations requires sales expertise.

"You have to have someone in the store who's reasonably knowledgeable," Lewis said. "Different processes are better at removing certain types of contaminants than others, so it takes sales literature and somebody in the store with an interest in completing the sale."

"We do quite a bit of departmental training, especially in a category like this," Lewis said. Product packages are better than ever about selling themselves but there is still a long way to go, he said.

Altogether, Orchard Supply stocks about 20 types of filters plus replacement cartridges for those filters.

"That's where the good sales come from," Lewis said. "People have to recharge those things quite frequently. The cartridges tend not to be promoted and discounted very heavily."

Cross-over sales are minor and margins are about average for the home center industry, Lewis said. Promoting a \$16 filter is one thing, but how does the store sell customers on a \$300 reverse osmosis system? Often, no sales pitch is necessary.

"We're getting requests for reverse osmosis equipment and that's interesting. Those customers tend to do most of the basic research themselves before they come in. They have a pretty good idea of what they're trying to accomplish," Lewis said. "Maybe we're lucky because we're in an area that has a lot of engineers. They tend not to be people who come in for a six-pack of 49-cent plants but go home with a \$300 water filter. It's not a spur-of-the-moment purchase."

**Clearing the air**

Back in the days when California air quality was still a novel target of Johnny Carson's jokes, the concern was over visible offenders—smokestacks and auto exhausts,



The Key-Rad-Kit™ measures radon levels in a matter of days.

About the only time concern was expressed about the quality of indoor air was when someone lit up a cigarette in the company of non-smokers.

Then came the scares: asbestos, formaldehyde, the "sick building syndrome," microbes in building ventilation systems, and radon.

Indoor air pollution is nothing new. Soot was found in the lungs of 500-year-old mummified remains from the west coast of Greenland. The cause: seal-blubber lamps burned in closed quarters. Tests on today's residents of Greenland, a relatively unpolluted part of the world, show they have three times the mercury and eight times the lead as was found in mummified remains.

Products are available to remove some contaminants from the air, but they haven't matched the popularity of water filters as home environment products. Air filters available include portable room filters and whole-house filters.

Sears dominated installed air cleaner sales for years. Units cost upwards of \$500 and required a professional to install,

said Paul J. Koenig, Peerless Faucet vice president of marketing services. There were others in the installed business, but none with high name recognition.

"Generally, home centers stayed clear of air filter systems. The high price point scared them," Koenig said.

Under the Peerless Aire trademark, Masco Corp. makes an electronic air cleaner that eliminates the need for professional installation. The air cleaner replaces the filters on most forced air furnaces and uses static electricity to trap dust, lint, most pollen and about a quarter of the smoke particles in the air. A foam filter coated with Dow Corning's Sylgard™ helps kill bacteria and fungus on contact.

Peerless claims its filters remove 90 percent of the pollen and allergens, 22 percent of the smoke, 78 percent of the dust and 96 percent of the lint from the air.

Some of the portable air filters go one step further, reducing carbon monoxide, ozone, and oxides of sulfur and nitrogen. For example, the Instapure® line from Teledyne Water Pik uses a system of three filters that also trap dust, cigarette smoke, pollen and room odors.

Koenig said Hechinger has done well

with the Peerless system, partly because it is easy to install. But finding a place in home centers for residential air filters has been difficult.

"Home centers need to look for these new categories," Koenig said. "Filtering systems are not a seasonal product. They control dust in the winter and pollen in the summer. There's also the potential for impulse sales because most people aren't aware such products are available," he said. Consumers will be hearing more about these products as houses become tighter and more energy efficient.

"In a tight house, I'd recommend an air cleaner," said Jim Ziembowicz, national sales manager for the American Metals Division of Masco. Like the sale of water filters, air cleaner sales are helped by the new attention to health and the old view of the home as a family's castle.

"Add to that we're gadget freaks in this country," Koenig said. "This gives us another chance to add a new set of flashing lights and buttons."

#### Radon: The natural toxin

Someone familiar with flashing lights was the Pennsylvania nuclear power plant

worker who set off alarms because of the radiation he was exposed to at home, not on the job.

This incident in 1984 was traced back to radon gas coming from the soil on which the worker's house was built. Suddenly, the public added the name of yet another toxin to its vocabulary.

One of the most recent discoveries was made by the Illinois Department of Nuclear Safety. The agency found that perhaps 40 percent of 1,500 homes checked throughout the state had radon gas in excess of federal standards.

Radon enters a house through dirt floors, cracks in foundation walls and floors, drains and sump pits, and is carried in tap water. The gas is measured in picocuries per liter (pCi/l). The U.S. Environmental Protection Agency recommends reducing exposure to about 4 pCi/l.

For all its deadly potential, radon can be detected and controlled using products widely available at home centers. Now available are home testing kits, such as Key Technology's Key-Rad-Kit™ and Ter-radex's Radtrak™ Alpha-Track Radon Gas Detector. In both cases, the test canisters are bought from a retailer, exposed in the customer's home, mailed to a laboratory for analysis, and the test results returned to the customer.

And which high-tech tools are needed to correct radon problems? Well, a caulking gun would be a good start toward sealing cracks through which radon could enter a basement. The EPA also recommends natural or forced ventilation of basements and crawlspaces. For energy efficiency, a heat exchanger can be used to conserve warmth in the winter while bringing in fresh outdoor air.

#### Assorted threats

Listing all the potential home health hazards would make a person wonder how he survived home life long enough to return to a "sick" office building or contaminate a factory.

For each new threat, though, there are products to help home owners detect and correct the problem. Detectors can monitor the level of carbon monoxide build-up from furnaces, water heaters, stoves and fireplaces.

Radiation detectors can spot leakage from microwave ovens. A newly available paint from Great Britain kills bacteria and mold on contact, and there's wallpaper available that, when heated, gives off a non-toxic gas that sets off smoke alarm.

So, even if air and water pollution problems grow beyond the ability of governments to control, home owners still have a chance to take control of what they breathe from their kitchen taps and breath in their living rooms. The only question is, who will sell them safety? ■

## What's in the water? These companies can answer customers' questions.

Some customers won't wait for headlines or health officials to tell them what's in their water. The problem for home centers, though, is that their service departments don't have thousands of dollars in testing equipment to detect unseen contaminants.

The following is a list of water testing laboratories that will perform a variety of residential water tests. The cost varies with the number and type of tests. Prices are accurate as of publication and, in most cases, include postage for returning samples.

**Aqua Associates Inc.**, P.O. Box 1251, Fairfield, NJ 07007. (201) 227-0422. Prices are \$45 to test for 14 toxins or carcinogens, and \$45 to test for pH, hardness and eight inorganic chemicals, including several metals.

**Hydro-Analysis Associates Inc.**, Noble Street Extension, Kutztown, PA 19530. (800) 622-6424 or (215) 683-7474. Prices are \$39 to test for pH and four inorganic chemicals; \$69 to test for pH and 13 inorganics; \$49 for 29 organic chemicals; \$89 for the testing of both inorganic and organic chemicals; \$99 to test total coliform, organics and inorganics; and \$139 to test for the preceding plus pesticides, herbicides and PCBs.

**National Testing Labs Inc.**, 6151 Wilson Mills Road, Cleveland, OH 44143. (800) 458-3330 or (216) 449-2525. A single price of \$89 covers testing for bacteria, pH, hardness, turbidity, 14 metals, seven inorganic chemicals, 34 volatile organic chemicals, 10 phenols, two herbicides, eight pesticides and PCBs.

**Suburban Water Testing**, 4600 Kutztown Road, Temple, PA 19560. (800) 433-6595 nationwide. In Pennsylvania, (800) 525-6464 or (215) 929-3666. A single price of \$98 covers testing for coliform, pH, hardness, nitrates, detergents, iron, and 33 volatile organic chemicals.

**WaterTest Corp.**, 33 S. Commercial St., P.O. Box 6360, Manchester, NH 03101-6360. (800) 426-8378 or (603) 623-7400. Prices are \$16.95 for a radon test; \$29.95 for coliform bacteria; \$31.95 for lead; \$54.95 for coliform, sodium, copper, fluoride, chloride, iron, nitrate, pH, hardness, nitrite, nitro, manganese; \$99.95 for 26 primary and secondary metals, pH, bacteria, hardness; \$104.95 for 58 organics; and \$174.95 for a comprehensive test of 84 organic and inorganic pollutants. Discounts and special prices may be available. ■