Consumer Reports BUYING GUIDE 1998

UPDATED PRICES & MODELS

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Water filters

Identifying the impurities in your water with a water test is the first step to getting the right filter.

Last CR report:
Filters, July 1997; Carafes, March 1996
Ratings: page 185 (filters)
Expect to pay: $10 to $900 or more

"Testing the water" on page 177).

Water from private wells or small systems should be tested for bacteria, for nitrate and pesticides if you live in an intensive agricultural area, or for volatile organic compounds if you live near a landfill or factory. If you live in an older house in an older neighborhood, it's a good idea to test your kitchen tap for lead.

or using special filters to eliminate iron and manganese.

What's available

Carafe filters. This type consists of a filter and a half-gallon pitcher. You pour the water through the top of the pitcher, wait 5 to 10 minutes for the water to be processed, then pour out the filtered water through the pitcher spout. Carafes do a reasonably good job at filtering out lead and chloroform. They also are the type to try first if your water passes tests but doesn't taste good. But carafes won't eliminate biological hazards, like *giardia* cysts, or fine sediment particles.

This type is costly if you use a lot of water. Filters must be changed after less than 100 gallons, so gallon for gallon, you pay more for filters than for other water-filter systems. Price range: $10 to $30. Annual cost of carafes: $20 to $200 (for one gallon of water daily).

Faucet-mounted models. These fist-sized devices screw onto the faucet spigot. A push-in or twist valve diverts water through the unit and out its own spigot, for filtered water on demand. In our tests, all faucet-mounted models improved the taste of water. The best excelled at removing organic chemicals, but did not do as well filtering lead. Installation is easy, but filters must be changed after less than 100 gallons. Price range of hard-

more than 95 percent of the chloroform and lead in our tests; even runners-up cut more than 85 percent of the lead. Most countertop models can process hundreds of gallons of water before the filter needs to be changed. Price range: $40 to $300. Annual cost: $10 to $125.

Under-sink models. These solid performers are bigger than most other types and often use two or three cartridges in a series. Under-sink models must be connected to the cold-water line and usually come with a separate spigot, which is mounted on the sink.

These filters are slightly harder to maintain, since there are multiple cartridges to change. In our tests, they did a good job screening pollutants, but not necessarily better than countertop units. You may need a plumber for installation. Under-sink models can process hundreds of gallons of water before the filters need to be changed. Price range: $40 to $500. Annual cost: $10 to $200.

Reverse-osmosis models. These cumbersome units can take up most of the space under the sink; a separate spigot is mounted on the sink. This type combines a conventional filter with a reverse-osmosis unit so that water is forced through a special cellophanelike membrane. This removes many organic and inorganic substances, including industrial chemicals that regular filters cannot purge—lead, nitrate, and such heavy metals as arsenic, barium, and chromium—

Testing the water

The only certain way to find out if you need a water filter for health reasons is to have your water tested by a reliable laboratory. We evaluated four mail-order labs to see how quickly and how well they sized up lead and chloroform problems we deliberately concocted. All did a good job of analysis; the primary variations were in how the services operated.

Here's what we found.

- Services vary. Some labs test for only a few pollutants, others for many. Some offer tests piecemeal, while others offer packages tailored to a specific environment (rural, city) or specific concerns.
- Some lead-test kits include two, not one, sample vials. We suggest you use those kits, since it's best to measure lead twice, first when the tap is turned on in the morning and then after water has flowed for a few minutes. (If a kit provides only one vial for lead testing, buy two kits.)
- Some labs want their money up front, when you order the kit; some want to be paid when you send your water in for analysis.

There are hundreds of labs. To find one certified by your state, call your state health department or environmental protection agency. The U.S. EPA Safe Drinking Water Hotline, 800 426-4791, offers information on testing.

Here are details on the four services we evaluated. The labs are listed alphabetically.

- Clean Water Lead Testing, Asheville, N.C. (704 251-6800). $17 for two-sample lead test; does not offer chloroform test. Payment (check only) must accompany order for kit. Least expensive and quickest lab for lead testing. Affiliated with University of North Carolina.
- Daily Analytical Laboratories, Peoria, Ill. (800 752-6651). $20 for single lead test; $100 for chloroform-only kit. Payment (check or money order only) must accompany samples.
- Spectrum Laboratories, St. Paul, Minn. (800 447-5221). $18 for single lead test; $75 for chloroform-only kit. Payment

Price range: $450 to $900. Annual cost: $100 to $175.

Shopping strategy

Official reports and lab tests can tell you if you need a water filter for health reasons. If your water passes tests but doesn't taste, smell, or look right, choose a filter meeting NSF International's Standard 42 for "aesthetic" problems. If testing has detected organic compounds or lead in the water, choose a filter meeting Standard 53 for that *specific* contaminant. If you need a filter capable of blocking parasites, look for one with a certification label that reads "absolute one micron".

Estimate your water needs by using gallon jugs for a few days. Then consider each type of filter's capacity and processing time.

Decide what to spend. What you spend depends primarily on the type of filter you choose. Carafes are the cheapest, reverse-osmosis filters the most expensive. Don't overlook annual operating costs, which vary by type and model.

What's in the stores. Filter systems are sold in water-treatment stores, hardware stores and home centers, department stores, and mass merchandisers.

Using the Ratings. We tested filters equipped with basic cartridges that remove off-tastes, lead, and organic chemicals. We spiked filtered water with roughly 80 parts per billion (ppb) of lead and 150 ppb of chloroform, demanding but not unrealistic levels. We sent about a gallon through each filter once every 90 minutes and determined its lifetime. The best models cut lead and organic contaminants by more than 95 percent, the worst by only 40 percent. All reduced chlorine and improved taste somewhat. If you can't find a model, call the manufacturer; see page 342.