



It's time to

# GET SERIOUS



about the quality of your family's drinking and bathing water. Here's why you need a **SERIOUS** water filtration system: Neither your water utility nor cheap "pour through" type filters are designed to handle difficult contaminants. You are on your own....and things are getting worse.

See Q & A inside for more details on these problems:

**PFOA**  
*Polyfluorinated compounds*

**Nitrates**

**Pharmaceuticals**

**Lead**

**Chromium-6**

**Fluoride**

**Arsenic**

**Fracking chemicals**

**Microplastics**

**Agricultural Chemicals**

*Such as glyphosate, atrazine, chlorpyrifos*



## Media & Filters

Lakota Scientific stocks over a dozen kinds of media and filter types to remove these contaminants. We continually incorporate new medias as they become available. Use the selection guide and call us for assistance if necessary. We can meet just about any water contamination challenge out there.



## The Lakota Team

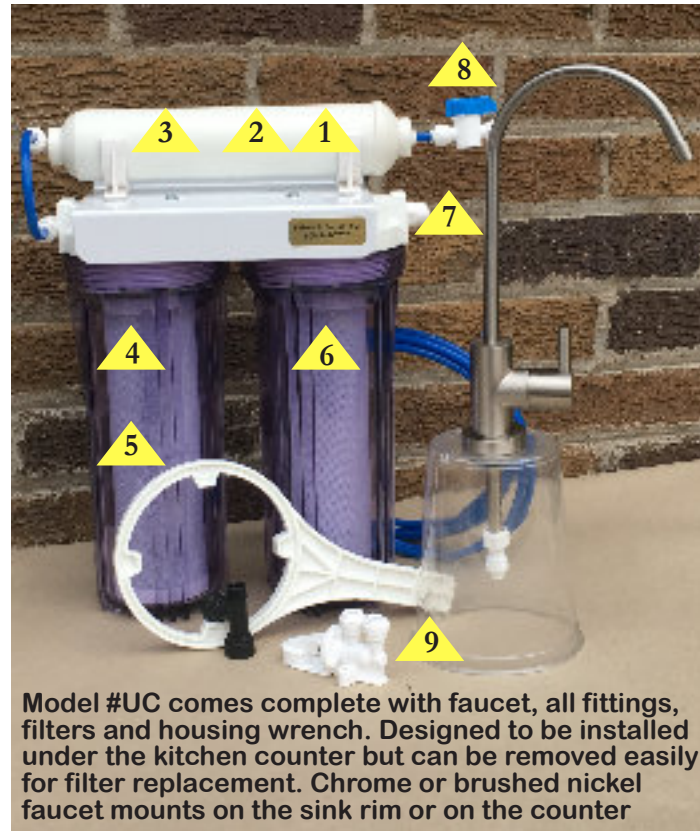
Lakota Scientific, Inc. is family owned and has been in business for nearly 30 years. We have a chemist and a microbiologist on staff to help you answer questions and to be sure you make the right selection when ordering your Lakota system. We encourage calls. Call anytime. **1-800-945-5782**

## Product Guarantee and Testing

We are not interested in selling a product that does not do what we expect it to do, no matter how severe your water contamination problem. If it cannot perform up to expectations return it for a full refund, no questions asked. Although we are not a licensed laboratory, we do have photo spectrometers and some testing capability and are willing to support our customers along those lines. Please call with questions regarding testing. In short, we try to give good customer service in trying to resolve these issues regarding drinking and bathing water.

## Lakota Water Filtration System

1. Oxidation-reduction media removes chlorine and serves as a bacteriostatic agent, preventing bacterial growth in the unit.
2. Acid washed bituminous-based carbon for the removal of high molecular weight chemicals such as pharmaceuticals and herbicides.
3. Sediment pre-filter built into the inline cartridge.
4. The LCB is a solid carbon block capable of one micron filtration for the removal of microorganisms such as giardia and cryptosporidium. The coconut based carbon has micropores of smaller size than the bituminous carbon for the removal of solvents, low molecular weight chemicals, disinfection by-products such as trihalomethanes and chloroform.
5. The LCB filter also contains a special heavy metal sorbent for the removal of lead, arsenic, chromium, uranium and cadmium.
6. Water is put through two LCB carbon blocks in series for maximum effectiveness.
7. Filtered water exits the unit and goes to the faucet mounted at the sink rim.
8. Ball valve to control flow rate and shut off water to the unit.
9. All UC units come with a "leak protector" that will shut water off to the unit in the event there is a leak.



**Model #UC comes complete with faucet, all fittings, filters and housing wrench. Designed to be installed under the kitchen counter but can be removed easily for filter replacement. Chrome or brushed nickel faucet mounts on the sink rim or on the counter**

**All UC units feature six stages of filtration using oxidation-reduction media, bituminous carbon, coconut carbon in two different forms, heavy metal sorbent, prefilter and post depth filters.**

**By using three separate media housings, we can incorporate several different types of carbon as well as a lot of carbon, plus oxidation-reduction media, and a special sorbent that also removes arsenic. We believe this gives the broadest spectrum of contaminant removal of any product on the market.**

### THERE IS MUCH TO BE CONCERNED ABOUT

In the nearly 30 years that we have been in business, we have seen very few changes for the better in terms of water quality. In fact, there are more things to worry about now than there were in 1990 when Lakota Scientific, Inc. was started. The basic fact remains the same, it is up to you to make sure that the drinking water for your family is clean and safe...to say nothing of just simply tasting better.

**Pharmaceuticals:** Minute quantities of prescription drugs have been flushed into the rivers and surface water and that eventually make their way to the tap is now known to be a valid concern just about everywhere in the U.S. because the utility, typically, cannot remove them.

**Hydraulic fracturing:** Sixty percent of all natural gas wells in the U.S. use hydraulic fracturing, which require millions of gallons of toxic chemicals to be injected into the ground in order to facilitate bringing gas to the wellhead. This is seen by many to be a serious threat to public water systems because several million gallons of toxic water per well is brought back to the surface where it may contaminate public water supplies.

**Agricultural chemicals:** We read more and more about atrazine these days with the new studies that have been released, but there are many more examples of herbicides, pesticides and chemical fertilizers that find their way into public water supplies and private wells.

**Arsenic:** New studies are showing that naturally occurring arsenic is a problem for many water supplies and wells all across the U.S. Because it is being linked to a wide range of health concerns including cancer. As a consequence, the maximum allowable contaminant level (MCL) has been lowered from 50 parts per billion (ppb) to 10 ppb, although 1 ppb is found to be problematic. (Dartmouth medical study [www.insmalldoses.org](http://www.insmalldoses.org))

**The usual culprits:** Low molecular weight solvents such as trichlorethylene; disinfection by-products such as trihalomethanes; high molecular weight contaminants such as pesticides; heavy metals such as lead, vanadium, chromium, uranium; and of course, disinfectants such as chlorine and chloramine.

## LAKOTA SYSTEM SELECTION GUIDE

There are three basic systems: the standard under-counter (UC), the add-on option to the UC (OP), and the whole house filter (WH). Lakota Scientific can use any combination of ten different media and filter types. Use the chart below to make the best selection for your situation. Std=comes standard. Opt=select option.

Media or Filter Type	UC	OP	WH
<b>Oxidation-Reduction media:</b> Transfers electrons to free chlorine, chloramine, and some heavy metals in solution to either chemically reduce them (put into a lower oxidation state) or have them adhere to the surface of the media rendering them harmless. Bacteriostatic agent prevents growth of bacteria within unit.	Std		
<b>Activated Bituminous Carbon:</b> Used for the adsorption of high molecular weight toxic chemicals such as pharmaceuticals, agricultural herbicides and pesticides such as Atrazine, Glyphosate, Chlorpyrifos, etc.	Std		
<b>Coconut shell derived activated carbon:</b> Used for the adsorption of low molecular weight chemicals and toxics such as trihalomethanes from surface water, solvents from industries. Put into a one-micron extruded block for filtration of giardia, cryptosporidium and micro-plastics.	Std	Opt	Opt
<b>Metsorb:</b> Specialized media used for the removal of dissolved lead, mercury, chromium-6, arsenic, and fluoride.	Std	Opt	Opt
<b>IX Resin-900:</b> Special media for the removal of fluoride. Also removes heavy metals and arsenic.		Opt	Opt
<b>IX Resin-100:</b> Specialized ion exchange media for the removal of nitrate and nitrite.		Opt	Opt
<b>Catalytic carbon:</b> A special activated carbon used for the removal of hydrogen sulfide (rotten egg smell in some wells and mineral spring water) and chloramine.		Opt	Opt
<b>Sediment filtration:</b> Graded density polypropylene filters for the removal of particulates, microplastics, Giardia, Cryptosporidium and fine sediment. Available in 0.5, 1, 5 and 10 micron filtration.	Std	Opt	Opt
<b>Ceramic cartridge:</b> 0.2 micron ceramic filter for the removal of microbiological contaminants. 99.99% removal of E-coli, Cholera, Salmonella, Guinea worm, Shigella Dysentery, Giardia, Cryptosporidium.		Opt	
<b>IX Resin #3695:</b> Specialty resin for the removal of arsenic at low pH		Opt	



### Whole House Unit

The WH, whole house, unit is installed at the point of entry into the home and is designed to remove chlorine and chemicals although it can be configured to address other contamination issues. See the selection guide for the available options and feel free to call for assistance in making your selection.

**OP Unit** The add on option simply plugs into the line feeding the UC and can be installed at any time should the need arise. See the selection guide for the available options or call and talk to a chemist for assistance. The OP is typically used when there is an extreme contamination issue, for example, excessive lead in the water such as in Flint, MI (although there are 5,000 water utilities in the U.S. that have a lead problem just as dire as Flint's). After Hurricane Harvey, for example, the city of Houston was besieged with a host of severe contamination issues that would have overwhelmed the average water filtration system. See the Q & A section for more details on the OP.



Prices			
UC	\$280	UC+OP \$390 (save \$40)	UC+WH \$790 (save \$90)
			UC+OP+WH \$890 (save \$140)
Call 800-945-5782 or 651-645-1004		www.lakotascientific.com	

# FAQ: Questions & Answers

## **Q... How much does it cost to maintain the Lakota System?**

A...Figure on about \$50 to \$70 per year for filter replacements. About the same as one coffee from a gourmet coffee shop every three weeks (which is probably made with tap water by the way).

## **Q... How difficult is it to install the UC, do I need to call a plumber?**

A... No need for a plumber, the installation is very easy and should not take more than 30 minutes. Call us if you have questions or problems, we can most likely help you through the installation procedure. In fact, call us any time you have a question or problem with your Lakota System. 800-945-5782

## **Q...How will I know when to replace filters?**

A...Once a year we send you a reminder card letting you know which filter(s) to replace or rotate.

## **Q...Does the Lakota unit remove chlorine and chloramine?**

A...Yes. Chlorine used as a disinfectant is relatively easy to remove. Chloramine, also used as a disinfectant, is much more difficult requiring a special media.

## **Q...Is it possible to get a discount on replacement filters?**

A...Yes it is, in fact we are always looking for ways to keep costs down for our customers. Join our "Preferred Customer Plan" for \$260. This then gives you everything you need to keep your UC up and running optimally for five years. We even send you reminder notices periodically when it is time for you to change out or rotate a filter. You will save about 33% with no price increases and no shipping costs. In addition this plan gives you an unconditional guarantee for all parts and shipping costs for anything that may fail on your unit, such as the faucet or a fitting.

## **Q...What if we are struck with a calamity such as a hurricane, or an earthquake?**

A...We have an emergency kit available for less than \$100. This includes a hand pump and all the fittings, special filters and tubing you need to convert your UC for use in such an emergency. Use your rain barrel, swimming pool, toilet tank, bathtub, laundry tub, etc. to store contaminated water before pumping it through the Lakota filter. Your drinking water will be of better quality and a whole lot less expensive than bottled water (if you can even get bottled water).

## **Q...Does the Lakota unit (UC) remove microplastics, which has been in the news a lot lately?**

A...Yes. Microscopic plastic "dust" has been found in 94% of all water utilities in the U.S. as well as all 259 commercial bottled water samples from 9 countries including the U.S. The danger is that anything less than 20 microns (your unit removes down to one micron with two filters in series) can enter the bloodstream and get to the liver and kidneys where they do serious mischief. The average load was 324 particles per liter. If you drink a liter per day that is 118,000 per year. The U.S. has no rules to govern microplastics in water. See [BBC.com/news/science-environment](http://BBC.com/news/science-environment). 2018.

## **Q...We live in a city with some especially severe contamination in the water supply, for example we know of high lead and arsenic levels. Can the Lakota System help in this situation? How can we be sure?**

A...Absolutely. We have the capability to customize filtration systems to address severe or unusual problems. Very high levels of these two dangerous contaminants can be removed by using an add on option (OP) to the standard UC unit. In this case we would recommend that the OP be configured with two filters containing 100% Metsorb, a specialty media designed to remove both arsenic and lead. While the standard UC uses the LCB filter containing 15% Metsorb it may not be enough to do the job in unusual conditions such as yours. You would then have independent testing done to be sure the contaminants are being removed. If they are not we would immediately refund all of your money and you would return the unit to us. We have no intention of selling you a unit that does not

perform as we expect. Both lead and arsenic have serious implications for the health of children as well as adults as you may know.

## **Q...Our city is known to have a Chromium-6 (also known as hexavalent chromium) contaminated water supply, what can we do?**

A...An EPA report a few years ago showed that Chromium-6 (also known as the "Erin Brockovich" chemical) was found in water supplies affecting 218 million Americans, more than half the country. Only one state attempts to regulate it (California) with an enforceable legal limit of 10 ppb. The public health goal however is .02 ppb since it is a known carcinogen. At our LSI lab we do have a photo-spectrometer that can measure low levels of this dangerous contaminate, call us to discuss your situation.

## **Q...We are hearing a lot about agricultural chemicals and the water supply, what's up?**

A...Plenty! The EPA is supposed to be protecting us and they no longer are doing their job, in fact they seem to be protecting certain corporations such as Monsanto that are a big part of the problem. We're talking about glyphosate, chlorpyrifos, atrazine, etc. These are dangerous chemicals that are getting into the water supplies and you are pretty much on your own as far as removing them. A good place to start your research is with the Environmental Working Group (EWG.org), or just give us a call, we can mail info to you. Also note that glyphosate is banned in other parts of the world where pesticide corporations and their money have less if any effect on the regulatory and risk assessment process.

## **Q...Are you not being a little bit harsh on the EPA?**

A...For whatever reasons the EPA has recently seemed to be letting us down in their mandate to regulate contamination in our environment. A recent article headline from May, 2018 reads: "[Fearing 'Public Relations Nightmare' Pruitt's EPA Blocked Release of a Major Water Contamination Study](#)" (from e-mails obtained by the Union of Concerned Scientists and published by *Politico*). Regulations have recently been relaxed that effect 60% of the surface water and the drinking water for 117 million people in this country. Public water supplies from 3000 utilities have lead contamination higher than those found in Flint, Michigan. More than 5000 public water supplies have water that does not meet the maximum allowed lead contamination levels. Keep in mind that "maximum allowed" does not mean safe. We have been in business now for 29 years and we have never used scare tactics to sell our products, but times are changing. As stated earlier: we are on our own.

## **Q...There seems to be quite a bit of controversy regarding fluoride in drinking water, what position does LSI take on this issue?**

A...We can provide you with links so you can do your own research but many of our customers want to remove it from their drinking water, whether it occurs naturally or whether it is added by the water utility. The problem is that it is very difficult to remove, unlike chlorine for example, which is easy to remove. We have several methods for the removal of fluoride and can discuss the issue with you, give us a call. We also have a photo-spectrometer that measures very low levels of fluoride and we would be willing to help along those lines if you are one of our customers. We have seen claims by others (even pour through types) that they remove fluoride but we have serious doubts that these claims are valid given what we know about how difficult it is to remove.

We can tell you that if you are mixing formula for a baby be sure there is neither lead, nitrate, or fluoride in the water!

**Lakota Scientific, Inc.**  
**800-945-5782 or 651-645-1004**  
**[www.lakotascientific.com](http://www.lakotascientific.com)**