



Berkey[®]
WATER SYSTEMS

Instructions for **Berkey PF-2™** Fluoride and Arsenic Reduction Elements

Berkey PF-2™ Fluoride and Arsenic Reduction Elements are designed for use in conjunction with **Black Berkey®** Elements to adsorb the following unwanted elements found in drinking water:

- Fluoride • Arsenic V and pre oxidized Arsenic III • Other residual heavy metal ions

Technical Information

FLUORIDE: Testing for fluoride was based on 20-30 ppm of the ion in the influent aqueous solution at a flow rate of no more than 3 gpm per cubic foot of media. Results of < 1 ppm of the fluoride ion in the effluent were typical for the media (>95% reduction). Under optimum conditions, effluent concentrations of less than 50 ppb were readily achieved (>99.75% reduction).*

ARSENIC: This product uniquely targets the entire family of arsenic oxide anions as well as the arsenic cations.*

**For maximum removal efficiency, maintain the water being treated between a pH level of 5 and 7. Actual capacity is dependent on the level of contamination of arsenic, fluoride and other competing heavy metal ions. Unusually high levels of these contaminants may reduce the capacity and efficiency of the elements.*

Element Replacement

Under normal conditions it is recommended that each set of two **Berkey PF-2™** Fluoride and Arsenic Reduction Elements be replaced after 1,000 gallons. *(The **Berkey Light®** system is about 2.75 gallons, therefore the **Berkey PF-2™** Fluoride and Arsenic Reduction Elements should be replaced after 363 refills. If the system is refilled about one time per day, the **Berkey PF-2™** Fluoride and Arsenic Reduction Elements should be replaced annually, if the system is refilled about twice per day, the **Berkey PF-2™** Fluoride and Arsenic Reduction Elements should be replaced about every six months).*



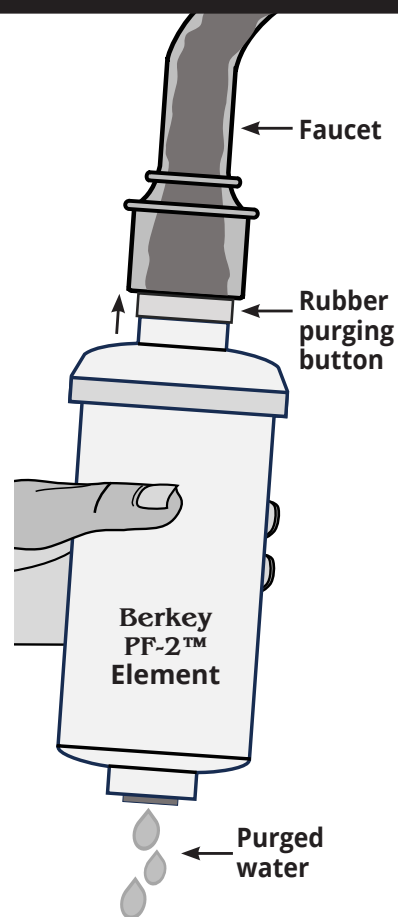
Caution! Elements must be purged prior to use.

Do not install before reading installation procedures. Do not screw on the **Berkey PF-2™** Fluoride and Arsenic Reduction Elements more than eight revolutions.

Purging the Elements

The media within your **Berkey PF-2™** Fluoride and Arsenic Reduction Elements contains micro fine process dust that can cause the filtered water to have a bitter taste. To dislodge the process dust from the **Berkey PF-2™** Fluoride and Arsenic Reduction Elements, it is necessary to purge each element. To purge your elements, use the following procedure:

1. With caps (blue or black) in place, remove the stickers and wash the *exterior* of each **Berkey PF-2™** Fluoride and Arsenic Reduction Element with mild dish soap.
2. With clean hands, remove both caps from each end of each **Berkey PF-2™** Fluoride and Arsenic Reduction Element.
3. Place the rubber purging button (tan colored) onto one end of a **Berkey PF-2™** Fluoride and Arsenic Reduction Element and align the hole in the button with the hole in the element.
4. Press the purging button up against a sink faucet so that the purging button creates a seal between the faucet and the **Berkey PF-2™** Fluoride and Arsenic Reduction Element.
5. While holding the purging button against faucet, turn on the **COLD** water gently, allowing water to fill the cavity of the **Berkey PF-2™** Fluoride and Arsenic Reduction Element and discharge from the opposite end. Allow water to discharge for at least 20 seconds or until water runs clear, whichever is longer. If residue is still present, please repeat the process until the water runs clear. *Hint: place thumb on top of faucet to apply pressure and create a better seal.*
6. Turn the **Berkey PF-2™** Fluoride and Arsenic Reduction Element the other direction and purge the other end, repeating steps 3-5. The element has now been successfully purged.
7. Purge each additional **Berkey PF-2™** Fluoride and Arsenic Reduction Element, repeating steps 3-6.



Installing the Elements

1. Remove upper chamber from filtration system and place it upside down on a counter so that the stems of the **Black Berkey®** Elements are facing upward.
2. Screw the larger, threaded end of each **Berkey PF-2™** Fluoride and Arsenic Reduction Element onto the stem of each (already primed) **Black Berkey®** Element eight full revolutions. (Notes: a) Do not screw on more than eight revolutions, as this may damage the internal media screen. b) Only one end of the **Berkey PF-2™** Fluoride and Arsenic Reduction Element is threaded; it should be facing up when system is fully assembled).
3. Replace the upper reservoir onto the lower reservoir (the **Berkey PF-2™** Fluoride and Arsenic Reduction Elements should now be hanging inside the lower reservoir). Fill the upper reservoir with water and let it drain into the lower reservoir. When the lower reservoir is full, discard the first batch of water, which may contain residual process dust. Your system is now ready for use.

Notes

1. Do not boil this element.
2. The water temperature will rise during the purging process. Therefore, use only COLD water to purge elements as the use of hot water may result in uncomfortable or unsafe water temperatures.
3. **Berkey PF-2™** Fluoride and Arsenic Reduction Elements reduce filtration flow rate by 15-20%.
4. When lower reservoir is full of water, the **Berkey PF-2™** Fluoride and Arsenic Reduction Elements will be immersed.
5. When water level in lower reservoir rises above the bottom of the **Berkey PF-2™** Fluoride and Arsenic Reduction Elements, it is normal for small amounts of water to burp through threads connecting **Berkey PF-2™** Fluoride and Arsenic Reduction Elements to **Black Berkey®** Elements.
6. If residual process dust is still visible after purging, repeat the purging process as described above. If residual process dust continues to appear in your **Berkey®** system, either repeat the purging and installation process above or drain the effluent water to waste, and then refill the system. Note: it may take up to 10 batches of water for process dust to disappear.
7. If/when you conduct the "Red Food Color Test" for the **Black Berkey®** Elements, you must remove the **Berkey PF-2™** Fluoride and Arsenic Reduction Elements first. Failure to do so may result in the voiding of the **Berkey PF-2™** Fluoride and Arsenic Reduction Element warranty.
8. The lower reservoir in most gravity-fed systems has a two to three-gallon capacity, and a typical household uses about one refill per day. We recommend that the upper reservoir be filled at night. The water from upper reservoir should be filtered by morning. It is normal for the process to slow down significantly when water level in lower reservoir rises above the bottom of the **Berkey PF-2™** Fluoride and Arsenic Reduction Elements. Households requiring more water can speed up the flow rate by drawing off the filtered water into a water pitcher or other container when water level in lower reservoir rises above the bottom of the **Berkey PF-2™** Fluoride and Arsenic Reduction Elements.

Note: For maximum removal efficiency, maintain the water being treated between a pH level of 5 and 7. Actual capacity is dependent on the level of contamination of arsenic, fluoride and other competing heavy metal ions. Unusually high levels of these contaminants may reduce the capacity and efficiency of the elements.

New Millennium Concepts, Ltd. Limited Warranty

New Millennium Concepts, Ltd. warrants this product to be free from defects in materials and workmanship for a period of 6 months from date of purchase. New Millennium Concepts, Ltd. will replace or repair any product that it deems is not properly functioning during the stated warranty period. Relief under this warranty is limited to the replacement or repair of defective materials or workmanship only. New Millennium Concepts, Ltd. shall not be held liable for incidental or consequential damage to personal property from, but not limited to, a defective unit, improper use, abuse, accident, or neglect, etc. No warranty will apply to units which have been used for purposes not intended, which have been altered so as, in the manufacturer's judgment, to affect adversely its performance. This warranty is for the original retail purchaser only, and cannot be transferred. Repair or replacement of parts will be made upon delivery to manufacturer's plant or authorized service dealer at customer's expense. The laws of the State of Texas, USA, will govern any disputes regarding this warranty or claim made. This warranty which is given expressly in lieu of all warranties, expressed or implied, or merchantability and fitness for a particular purpose, constitutes the only warranty made by New Millennium Concepts, Ltd.

