

In nature, water is purified as it evaporates from the salty oceans and falls back to Earth as pure rainwater. The ground itself is a water filter. Water can flow hundreds of kilometres underground through sand and gravel formations and be cleaned in the process. Forests and woodlands act as natural sponges by slowing water flow, allowing microbes to absorb chemicals, purifying the water. Certain chemicals in the rocks can even destroy some harmful pollutants.

Lee Wilson is an award winning research chemist and a member of the Canadian Métis community. The first person from his village to earn a PhD in chemistry, he applies his understanding of the properties of matter to solving the problem of contaminated water.

Wilson's research involves developing materials with microscopic holes just the right size to trap the particles of pollutants but still let the particles of clean water pass through. Different-sized pores can be manufactured to capture different sizes of pollutants.

Imagine being able to place a pump into polluted water and out of the other end comes water fit to drink. Now imagine being able to do this for an entire village or town. In a world where clean water is in short supply, ways to make water clean and keep it clean will always be in demand.



Lee Wilson

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Find out more about the work of Lee Wilson and his colleagues. Visit [www.bcs9.ca](http://www.bcs9.ca).

## Combining Chemicals

## Find Out ACTIVITY

In this activity, you will describe the changes that occur when various chemicals are combined in a beaker.

### Materials

- 400 mL beaker
- 50 mL water
- 150 mL vinegar
- 5 raisins
- 25 g baking soda

### What to Do

1. Pour 50 mL of water into the 400 mL beaker.
2. Add 150 mL of vinegar to the beaker of water. Record your observations.

3. Add the raisins to the beaker. Record your observations.
4. Slowly add the 25 g of baking soda to the beaker. Immediately record your observations and then describe any changes that occur at 1 min, 3 min, and 5 min.

### What Did You Find Out?

1. List and describe the different changes you observed in the beaker.
2. What happened to the solid baking soda that you added to the beaker?
3. Describe and explain what happened to the raisins after the baking soda was added.