

sTEM-at-Work

Puzzle #11

Water filter performance test

Everybody has something to do with nano, FLATE's puzzle team is no exception!

This time your water purity technician has shown you the graphic of the backflow test for the carbon nano-tube based technology water filtering system. When the water to be sold under your "purer than the driven snow" brand passes one way through the filter, the water is purified and then sent to the bottling facility. Eventually the filter is clogged and its performance is diminished. The tech runs the back flow test by disconnecting the forward flow, then pumping purified water through the filter in the opposite direction and monitoring the backward water flow rate. The plot shows the forward pressure vs. flow profile in blue, and the back flush pressure vs. flow profile in orange.

Should the filter canister be replaced? (Yes or No)

