Which process for the extraction of caffeine does the Swiss Water process utilize for decaffeinating coffee?

A. Boiling

B. CO_2 application under pressure

C. Sonication

D. Osmosis

From: https://coffeeconfidential.org/health/decaffeination/

The History

This chemical-free water decaffeination process was pioneered in Switzerland in 1933 and developed as a commercially viable method of decaffeination by Coffex S.A. in 1980. In 1988 the Swiss Water Method was finally introduced to the market and its facility is based near Vancouver, British Columbia, Canada.

A Short Explanation of SWP

This particular method of decaffeination is different from what we've so far seen in that it does not directly or indirectly add chemicals to extract the caffeine. Rather, it relies entirely on two concepts, namely solubility and osmosis, to decaffeinate coffee beans.

It begins by soaking a batch of beans in very hot water in order to dissolve the caffeine. The water is then drawn off and passed through an activated charcoal filter. The porosity of this filter is sized to only capture larger caffeine molecules, while allowing smaller oil and flavor molecules to pass through it.

Consequently, we end up with beans with no caffeine and no flavor in one tank, and caffeine-free "flavor charged" water (aka "Green Coffee Extract") in another tank.

And here's where the magic happens. The flavorless caffeine-free beans are discarded, but the flavor rich water is reused to remove the caffeine from a fresh batch of coffee beans.

Since this water already is saturated with flavor ingredients the flavors in this fresh batch can't dissolve; only caffeine moves from the coffee beans to the water. So, the result is decaffeination without a massive loss of flavor.

Coffees decaffeinated by this method are always labeled as "SWISS WATER" Decaf.

This method is almost exclusively used for decaffeination of organic coffee.

Coffee decaffeinated using the environment-friendly Swiss Water Process undergoes regular caffeine level audits to ensure compliance to 99.9% caffeine-free.