

New Machine Uses Old Tricks to Successfully Sniff Out Counterfeit Drugs

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I [previously wrote](#) about a study that found high levels of fake pharmaceuticals in developing world and how they could cause a lot of damage by creating new strains of drug-resistant diseases. Now there is a [machine](#) that can find 80 percent of the counterfeit medicines on the market, which should be able to target medicines with impurities, less than the right amount of active ingredients and flat-out fakes.



Fastcoexist.com/machine

Developed by Serge Rudaz, an associate professor at the Geneva University school of Pharmaceutical Sciences, the machine costs about \$10,000, which is a tenth of what similar devices on the market cost. Though they could not find manufacturers since there was such a small profit margin (cheap machine and cheap solvent to make it work), Rudaz was able to give this technology away with the help of donors.

The thing about this machine that differentiates it from the rest and the reason for its low-cost is that it uses technology that is already a century old: capillary electrophoresis. Water and solvent dissolve the drug being tested in a capillary tube while a high voltage is applied. By determining how fast the dissolved drug moves through the solution, technicians can decide if it is real or not.

This is a great short-term solution that will save lives once it is implemented. However Rudaz does admit,

You won't solve counterfeits completely. We detect some drugs, but the problem remains. The problem of counterfeits is not only a problem of analytics. It is also a problem of economics and society which is too big for me.

The rise in counterfeit drugs is attributed to the low-cost in production and the [demand for medicines is infinite, according to the World Health Organization](#). WHO recommends stronger legislation, increased regulation and increased penalties for perpetrators to drastically reduce the number of counterfeit drugs found.