Gold, a yellow precious metal, contributes to the wealth of our great nation, Nigeria. Though, it has fattened our country’s pocket by bringing about foreign investors, gold mining has taken the lives of many Nigerian citizens who just try to make a living and provide for their families. According to conducted research, long term exposure to metallic properties like mercury and lead chromate can degrade the pulmonary surfactant and lung function. Mercury is a potent neurotoxin that can have serious health effects on miners who come in contact with it. Gold miners are exposed to toxins like these almost every single day and because of this, are liable to different kinds of life-threatening diseases and infections. You might think it’s only the miners’ lives that are at stake, but truth be told, the people who live in that locality are equally affected. The water in which the gold is cleaned, finds its way to the rivers and thus contaminates it, making it unfit for cooking and drinking. The Sacred Osun river got toxic due to this life threatening and hazardous practice. During the amalgamation process, where gold is separated from the ore using mercury, fumes are released into the air, and miners can inhale these venomous fumes or absorb, mercury into their skin. Lead poisoning is also a major health issue among miners in the gold industry.

My vision is to bring into existence, a lightweight, user friendly, wrist-worn device. The purpose of this device is to monitor and measure the level of toxins present in the body due to gold mining. Gold miners can get immediate feedback on their toxin exposure levels, enabling them to take prompt action to mitigate health risks. The introduction of a wrist worn device for observing toxin levels, offers a proactive approach to safeguarding the health of gold miners. Due to the economic and financial hardships of rural communities where advanced healthcare facilities may be limited, it is safe to say that a household, or even a whole community can own a single watch. The device is planned to help save lives and reduce the number of people with respiratory problems, silicosis, pulmonary tuberculosis and pleural diseases caused by the harmful effects of gold mining.

In conclusion, I believe my invention will be a life changing one if worked on and it will safe-guard the well being of many gold miners, enhance safety standards and protect communities not only in Nigeria, but the world at large. I am convinced that the introduction of my innovation, hold a great promise to improve health outcomes and safety quality in the mining sector. The adoption of my creation will represent a significant step towards creating a healthier, safer and praise worthy environment for gold miners all around the world.

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