

Plymouth firm plays part in Chile's drama



Rodrigo Arangua, Nonin Medical, Inc.

Alex Vega Salazar, the 10th miner to ascend, gave the thumbs up as he emerged from 2,000 feet below ground wearing a wireless fingertip vital-signs monitor made by Nonin Medical Inc.

Nonin Medical's devices monitored vital signs as the miners ascended.

By **CHEN MAY YEE**, Star Tribune

Swept up in the human drama, euphoria and tears, anyone watching the images of 33 Chilean miners emerging after more than two months underground might have missed the tiny black devices clamped to each man's left index finger.

Not the folks at Nonin Medical Inc.

The Plymouth-based company made the devices, which monitor heart rates and blood oxygen levels and are usually used in hospitals. In this case, physicians on the surface used the devices to track vital signs as the miners ascended in rescue capsules.

Nonin's devices are used by the military in Iraq and Afghanistan, and by groups such as Doctors Without Borders in Haiti. But never 2,000 feet below ground. "We never would have anticipated such a use," admitted Tricia Haydon, vice president for Nonin's Vital Signs unit.

Nonin officials say they're not quite sure how the devices got to the Chilean rescuers. It may have been through the New Zealand-based manufacturer that makes an accompanying harness, or through any one of the many international aid and military groups that offered aid and technology during the 69-day drama that riveted the world.

Nonin (the name comes from the word "non-invasive") has been selling monitoring devices for more than 20 years. The wireless version used by the miners is about the size of half a stick of gum. It sells for about \$475 and is used in ambulances and emergency rooms.

In the Chilean case, if the devices had detected signs that a miner was low on oxygen or going into shock, physicians up above would have known ahead of time what to expect, said Dr. Keith Wesley, an emergency medicine physician who oversees medical transport at HealthEast.

As it turned out, all the miners resurfaced in surprisingly good health.

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