St. Petersburg Police report that touch DNA has helped solve 38 percent of burglary cases

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PINELLAS COUNTY, Fla - New technology is helping police and prosecutors in the Bay area solve burglary cases.

It goes far beyond fingerprints but can be just as accurate. Analysts say it just takes a few days to get the results.

Pastor Mason Dorsey is one person this technology has helped.

Back in February, someone broke into Riviera United Methodist Church in St. Petersburg. The person climbed through ceiling tiles to gain access to the church office.

Once inside, the person stole $70 and tried to pry open a filing cabinet with a screwdriver to access private financial information. When that failed, the person left.

St. Petersburg Police came out, took a report and found a partial fingerprint on a ceiling tile.

Since the fingerprint was left on a porous surface it proved worthless to investigators.

"I'm thinking there's not a lot of hope for this one," said Pastor Dorsey.

Detectives did take into evidence a screwdriver they believe the thief used to try and pry open the cabinet and submitted it for a new type of forensic testing called touch DNA.

It is not DNA that is visible like blood or saliva. It is microscopic.

"Touch DNA is the transfer of cells from one item to another via touch," explained Janel

Borries, DNA supervisor at the Pinellas County Forensic Laboratory.

Analysts like Borries scrape or swab surfaces to get enough skin cells to match to suspects.

"If you open a door or you touch somebody, all of those things could lend themselves to transfer of skin cells," Borries added.

Borries told ABC Action News all it takes are 30 skin cells. That is not a lot considering scientists estimate humans shed one million skin cells a day.

"Typically, there are things will determine how much is put down or how many cells are put down, whether it be if the person is sweaty. So that is a medium for transfer," Borries said.

Once skin cells are recovered from a scene or from an item, analysts use a process called polymerase chain reaction to make duplicates of the genes.

It is a very similar procedure to standard DNA testing.

During the second step in the lab, fluorescent compounds are mixed in that attach themselves to specific DNA locations, thus, giving a genetic profile of a person.

Typically, 13 DNA locations are specifically chosen because they are highly variable between people.

If a DNA profile is extracted, it is compared to a suspect's DNA or entered into an FBI database.

In the case of the church burglary, analysts say the profile from the screwdriver matched Scott Regan, 44.

But how accurate is the DNA match? According to Borries, it is one in 330 million.

It was enough evidence for St. Petersburg Police to arrest Regan.

The touch DNA also linked him to four other church burglaries in the Bay area.

"He actually is the poster child for touch DNA," said Major Mike Kovacsev with the St. Petersburg Police Department.

Touch DNA has been around for nearly a decade but the forensic method has only been available at the Pinellas County Crime Lab for the past three years.

In that time, Kovacsev says the method has helped solve 38 percent of burglary cases.

Now, lab analysts say nearly 90 percent of cases that come through the crime lab have one piece of evidence collected in an attempt to obtain touch DNA.

"For us, its given us another tool to utilize and those cases prior to August 2010 would've never been solved," Kovacsev explained.

Detectives say thanks to this method a lot of crime victims have been given closure.

In Pastor Dorsey's case, it is giving him a day in court.

"To identify the person to us was a big relief and pretty impressive," Dorsey said.

Regan is still being held in the Pinellas County Jail. He is awaiting trial and faces nine burglary counts.

As for touch DNA, detectives say they are now using it to help solve more violent crimes in the area like arson and murder.