

Turn a familiar lateral-flow strip into a **quantitative, low-background test.**

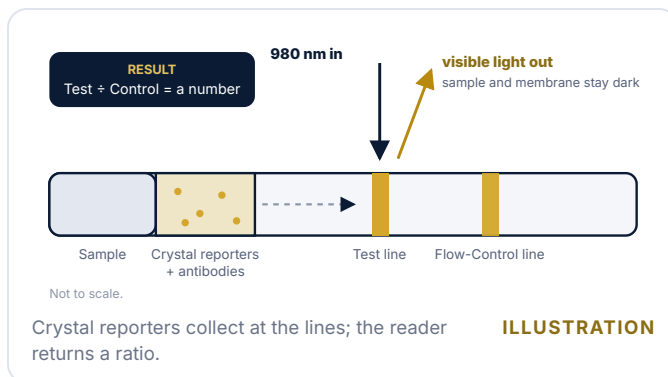
IMS rare-earth reporter crystals carry the signal on the strip. Biology chooses the target; the material makes the line something a reader can measure.

— THE PROBLEM

- Most rapid strips are read by eye as positive or negative, so they cannot follow how much of a marker is present.
- Conventional fluorescent labels compete with background glow from the sample, membrane and plastic, and they fade under the light.
- Lab methods are often slow and costly and need trained staff. TB testing still starts with sputum, which is hard to collect, especially from children.

— WHAT INTELLIGENT MATERIAL DOES

- Infrared in, visible out.** Crystals are excited at 980 nm and emit defined visible light. Ordinary biological material does not, so the background drops away.
- A number, not just a line.** The reader measures each line against calibration data, for example the ratio of Test-line to Flow-Control-line light.
- The same every time.** Crystals are grown to one size, so a batch responds the same from strip to strip, and they resist fading while the strip is read.
- Room to multiplex.** Emission color can be combined with glow lifetime and other optical properties to code several targets.



— PROOF

IN USE Field-proven, research use

More than 200,000 patients tested with IMS reporter crystals in research lateral-flow programs, including leprosy, tuberculosis and schistosomiasis with Leiden University Medical Center.

DEMONSTRATED Published, 2008

0.5 pg/mL detection limit for *Schistosoma* CAA in a Corstjens-led study, versus 10 pg/mL for CAA-ELISA.

DEMONSTRATED Published, iScience 2023; in-sample

A seven-protein TB host-response panel told **active from latent TB** with 83% sensitivity and 97% specificity. The authors call for independent validation.

Research use only. Not cleared tests: not cleared or approved by the U.S. FDA, and not for clinical diagnosis. **IP:** the base material is covered by a composition-of-matter patent (U.S. 9,181,477 and family); patent pending on the system and method.

— HOW TO WORK WITH US

1 Sample

Request reporter crystals for your research assay. Bring the biomarker and the setting.

2 Pilot

We work backward from your target to the reporter, the strip and the reader, and test the assay with your team.

3 License and supply

NovaVera Corp. makes and sells Intelligent Material under an exclusive license from IMS, which holds the IP.

Contact: <https://www.intelligentmaterial.com/contact/?topic=Diagnostics#contact-form>

We reply within two business days.