

TIME RESOLVED FLUORESCENCE IMMUNOASSAY

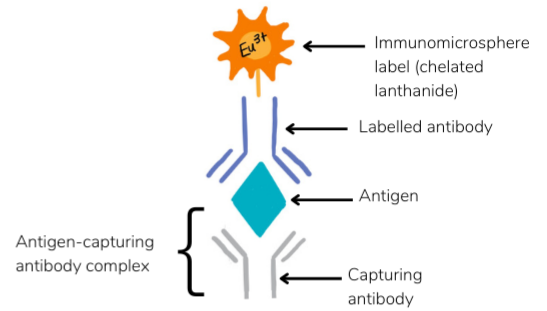
The **PREMALABS Point of Care Testing (PoCT)** devices use advanced **Time Resolved Fluorescence Immunoassay (TRFIA)** technology in order to detect and quantify particular biomarkers.



HOW IT WORKS

Our test relies on a specific antigen-antibody binding reaction:

- The sample contains the antigen we'll be testing for
- This binds specifically to a capturing antibody
- The antigen-capturing antibody complex then binds with an immunomicrosphere-labelled antibody



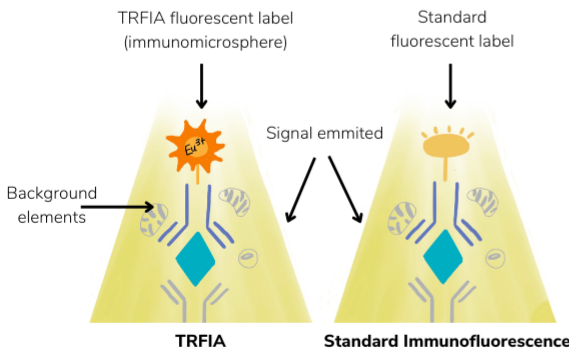
Once shone on with a UV light source, the immunomicrosphere will emit a fluorescent signal which will be converted to a digital value by a transducer

The **MORE**
ANTIGEN in the sample,
the **STRONGER**
the **SIGNAL INTENSITY**

This is how it's possible to detect and quantify the concentration of a biomarker

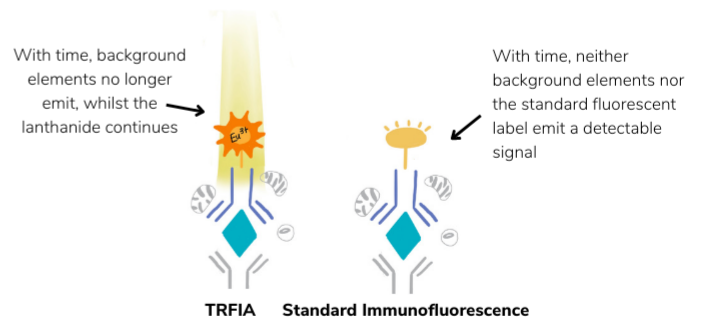
TRFIA VS STANDARD FLUORESCENCE IMMUNOASSAY (FIA)

In both methods, when UV light is shone, background elements such as buffer, proteins, plastics etc. emit a signal alongside the fluorescent labels, leading to a relatively non-specific, high intensity of signal, detected early on.



Standard FIA fluorescent labels emit for a short time and when the signal is read during this time, it is contaminated by background emission.

TRFIA immunomicrospheres are chelated lanthanides. They shine brighter and longer than standard fluorescent labels. Therefore, the detection window for this signal can be delayed. This results in minimal background emission interference, hence a more accurate result.



This is the essence of Time Resolved Fluorescence Immunoassay (TRFIA).

WHY IS TRFIA BETTER?

- ✓ Longer and brighter emission time of chelated lanthanide immunomicrosphere
- ✓ Minimal background noise
- ✓ Reliable and accurate test results
- ✓ Higher sensitivity of test