

## generic Rapid Assay Device

### Why gRAD

- ✓ Combines advantages of lateral flow tests and ELISA
- ✓ You can develop the assay in your own laboratory
- ✓ Provides a highly mobile assay platform with ELISA precision
- ✓ No need to set up and run a specialized laboratory
- ✓ Results in under 15 minutes, where you want, when you want

### What you require

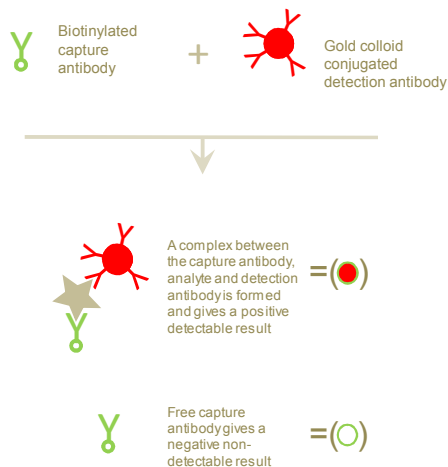
- ✓ Your test specific reagents e.g. an antibody pair (one of which is biotinylated)

### What RapidAssays supplies

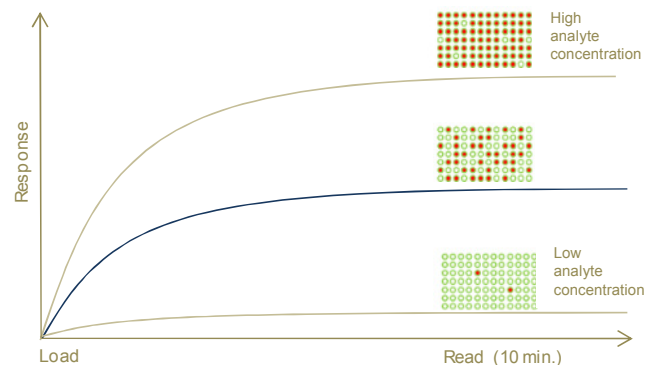
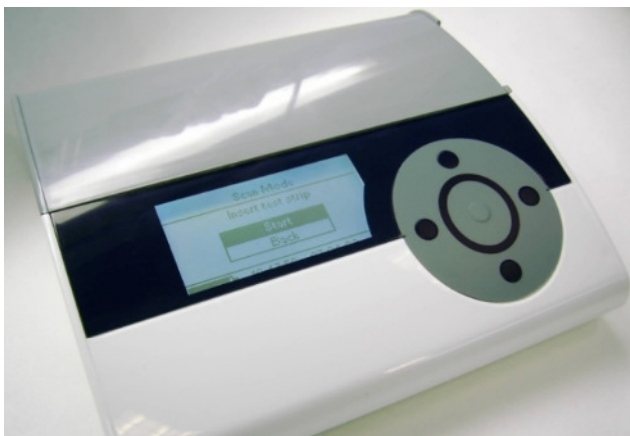
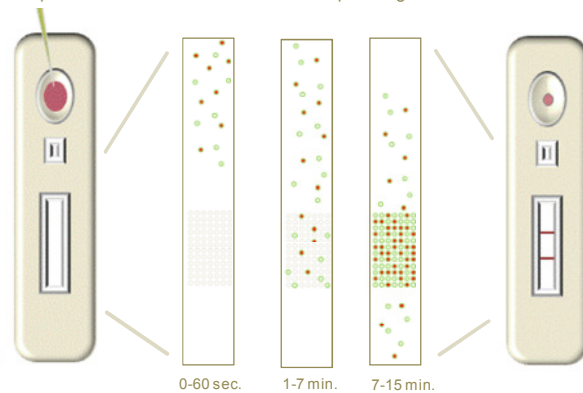
- ✓ The gRADs
- ✓ Gold colloid conjugation kit ( to produce the detection conjugate)
- ✓ Reader, if required

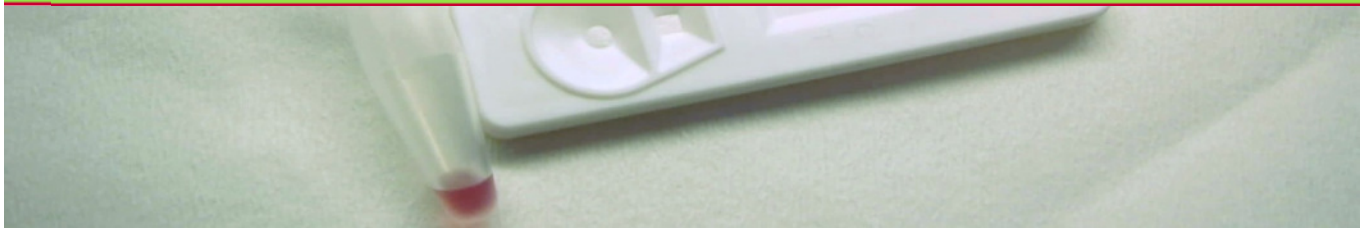
Add the sample to your specific test reagent and mix

Load the mixture onto the gRAD



The mixture passes from the application window through the gRAD to the test line which binds and immobilises the biotinylated capture antibody. The ratio of positive complexed to negative free capture antibody in the sample mixture is transferred to the test line. Once the test line is saturated, the amount of positive complex present is independent of the further flow of the sample/ reagent mixture.





RapidAssays' focus is to deliver reagents, materials and methods that allow for the development of both qualitative and quantitative rapid assays without the need to invest in expensive LFA production equipment. This is achieved through the use of generic Rapid Assay Devices (gRAD). A gRAD does not contain analyte-specific reagents. The analyte-specific reagents are mixed with the sample before application to the gRAD as part of the specific assay protocol. In most cases this will involve adding the sample to a vial containing the preserved specific reagents. The result can be read visually or with one of the available reader options.

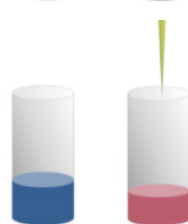
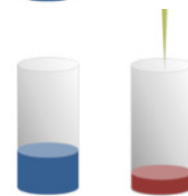
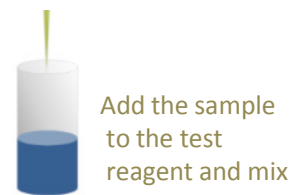
RapidAssays provides all the materials and equipment you require to develop and produce your own rapid assay. You decide on the assay format, for example a sandwich assay using an established antibody pair. The capture reagent is produced by biotinylating the capture antibody using standard laboratory procedures. The detection conjugate is produced by means of a supplied kit. The amounts of capture and detection conjugates are optimized and the test reagent is divided into aliquots and preserved. A calibration curve for that batch of test reagent is made and used to determine the concentration of the unknown sample.

RapidAssays has developed methods of improving the precision of LFA by means of its gRAD technology. Using gRAD, you can achieve a precision comparable to that of ELISA in a procedure that takes only 10 minutes. In addition, gRAD only requires minimal training and is fully portable, allowing point of sample testing in the field. gRAD is suited to both research and monitoring applications and allows you to develop your own spot tests without the delay and expense associated with specific LFA development with a production partner.

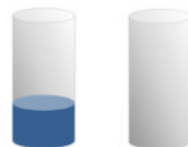
In gRAD, both the capture and detection conjugates are mixed with the sample before it is applied to the device, so that contact with the analyte takes place in a controlled manner. However, the immobilization of the capture conjugate at the test line still takes place in a flow system and is vulnerable to variations in the flow of the sample through the device. To overcome this, a sufficient excess of the biotinylated capture antibody is used so as to saturate the streptavidin immobilized at the test line. Once the immobilized streptavidin is saturated with the capture antibody the result is independent of the variation in the amount of sample mixture that passes over the test line.

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Distributors stamp



Transfer to the gRAD



And read after 10 minutes

