

## Immunoanalyzers

### Self-determining dilution factor

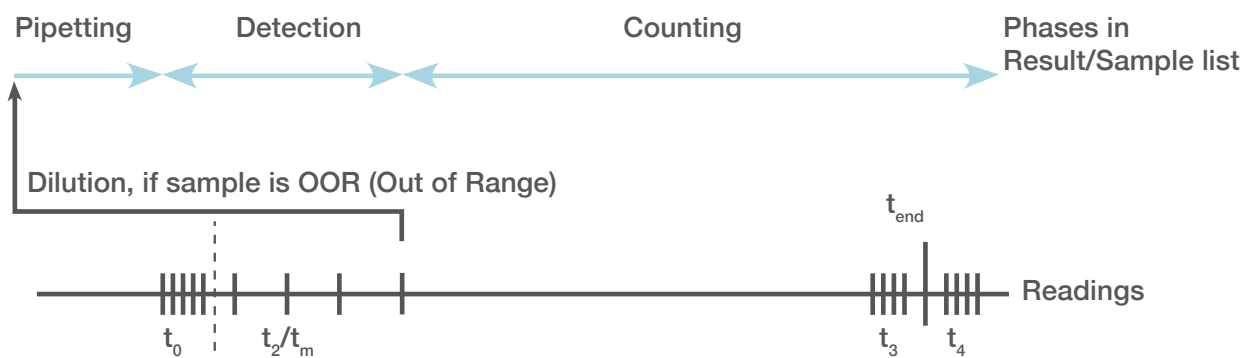
Significantly reduce hands on time from sample to result

#### Problem

When high concentrated sample is detected out of range, it must be diluted to lower the concentration, so that the sample concentration is in the direct measuring range. In analyzers which do not have an intelligent system like self-determining dilution factor, dilution factor must be chosen manually. In addition a too high dilution should be avoided to reduce the error rate on the results. The assessment of the right dilution factor usually takes a couple of attempts. This will cost both time and material.

#### Solution

TRACE™ Technology used on Thermo Scientific™ B·R·A·H·M·S™ KRYPTOR™ Analyzers has the benefit of using homogenous immunoassay and the early detection of out of range samples<sup>1</sup>. As soon as the out of range sample is detected, intelligent system on B·R·A·H·M·S KRYPTOR autonomously determines the dilution factor and executes the dilution without any user intervention. This feature of self-determining dilution factor enhances the workflow.



### How it works

- Step 1: Kinetic measurement method on B·R·A·H·M·S KRYPTOR Analyzers is used to determine the signal increase of the analyte in the sample within few minutes.
- Step 2: If the measured relative fluorescence signal ratio of the bound and unbound signal at  $t_2/t_m$  is out of range during the first minutes of incubation, the B·R·A·H·M·S KRYPTOR Analyzers will select the right pre-defined dilution factor automatically and dilutes the sample.
- Step 3: Actual RFU is automatically calculated by B·R·A·H·M·S KRYPTOR Analyzers after dilution.
- Step 4: RFU is then converted in concentration with the calibration curve obtained on the instrument.

### Benefits

- Easy and fast assay processing steps with TRACE Technology.
- Enhanced time to result.
- Automatic early detection of high concentrated samples to minimize/avoid hook effect.
- Optimized precision and accuracy by avoiding dilution errors.

#### References:

1. Mathis, G., Rare Earth Cryptates and Homogenous Fluoroimmunoassays with Human Sera. Clin Chem, 1993. 39(9): p. 1953-1959.

### Clinical Diagnostics

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