

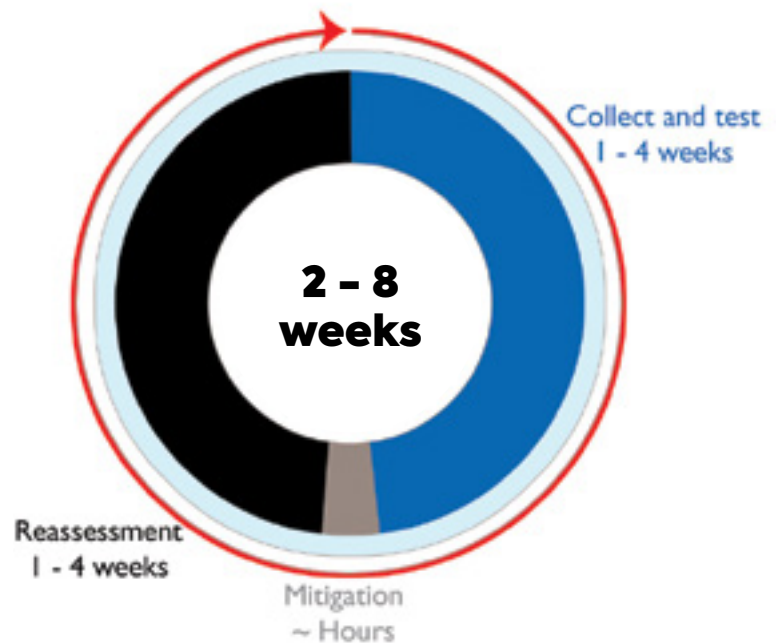
## QuickChek SRB Detection Accurate, Fast and Reliable

SRB are indigenous to the oil field and cause severe operational problems. Field studies have shown that the operational problems can be prevented or alleviated by controlling SRB populations. Quick, accurate SRB population estimates can reduce operating costs significantly, increase oil field safety and decrease sulfide releases into the environment.

Historically, culture tests, such as those outlined in NACE Standard TMO-194 have been used to estimate SRB populations. The downside to these tests is:

- Requires refrigerated samples
- Samples must be transported and tested within 48 hours
- Interferences from other chemicals and high total dissolved solids
- Time to result – up to 28 days
- Mitigation delayed with greater issues for new or problem wells

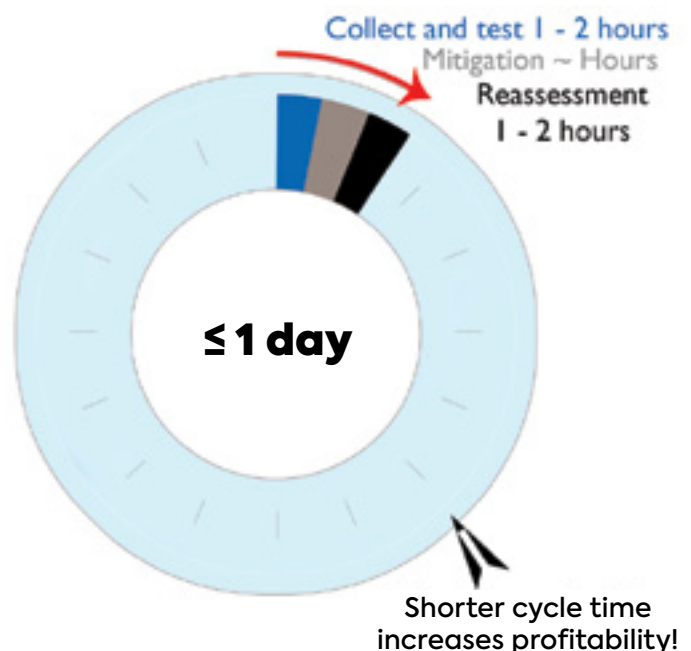
### Traditional Culture Test Cycle Time



Ideally, a test that can reduce the feedback cycle time would be of significant value to oil well owners, operators and service companies in battling microbiological contamination such as the **QuickChek SRB test kit**.

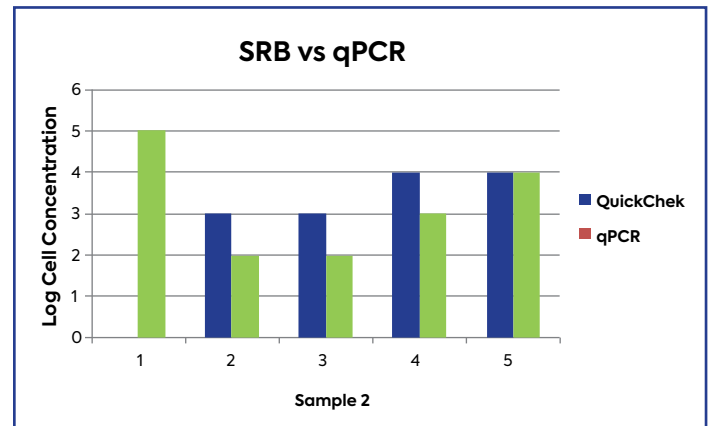
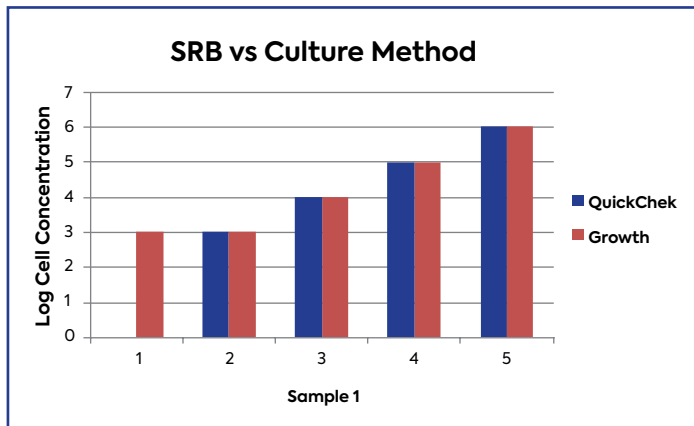
- Results in 20 minutes not 28 days
- Accurate measurement with correlation
- Equal or better than culture methods
- Better correlation with qPCR than culture methods
- Samples run in the field or lab with no logistical or technical limitations on time or transport
- Faster treatment of wells

### SRB Test Cycle Time



# QUICKCHEK SRB VS CULTURE MEDIA TESTS AND QPCR

Modern Water recently funded a study conducted by an independent laboratory to compare its Quickchek SRB test against conventional test culture methods and qPCR. A broad range of oilfield sample types were used. Significant findings from the study are highlighted in the following graphs.



- Sample 1 does not contain SRB but does contain interfering bacteria which the growth/culture and qPCR methods were susceptible to and provided false positives
- Samples 2-5 show excellent correlation to the growth/culture and qPCR methods where SRB is contained in the sample

## Conclusions

### QuickChek SRB

- Is less susceptible to interference, including salinity up to 15%
- Correlates well to both the culture method and qPCR
- Offers rapid results in 20 minutes
- Is less expensive than qPCR
- Requires no special handling, timing or transport of the sample
- Allows the ability to make same day treatments as required