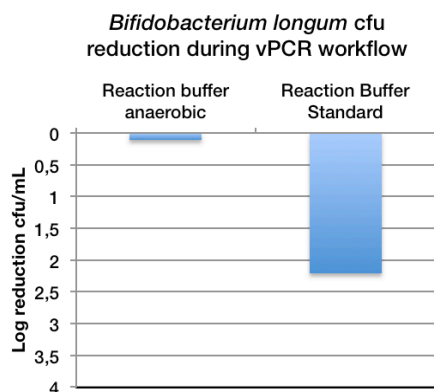


# Reaction buffers for viability PCR

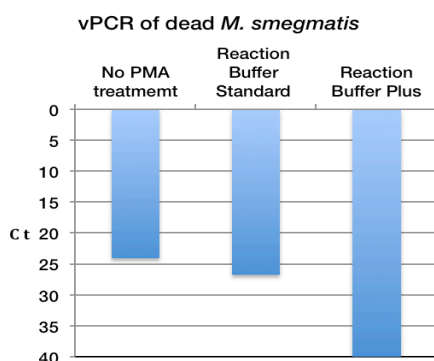
For optimum sample treatment during reagent incubation

One of the critical steps in all vPCR workflows is sample and reagent incubation in the dark. During this treatment it is very important to maximize reagent diffusion through dead cells, spores, cysts and microbial aggregates. On the other hand, this procedure is also necessary to prevent viable cell damage, for this reason ionic strength, pH, nutrient level and aerobic/anaerobic balance need to be under control. GeniUL introduces three different reaction buffers: Standard, Standard Plus and Anaerobic, optimizing this procedure for different applications.



*Bifidobacterium* cell suspensions with anaerobic and standard Reaction buffers, were treated with a conventional vPCR workflow ( 50  $\mu$ M of PMA during 30 min, PhAST Blue at 100% during 15 min).

Anaerobic Reaction buffer protects anaerobic cells during vPCR work flow.



Thermally inactivated (95°C, 30 min) *Mycobacteria* suspension. Untreated or subjected to a 30 min. 50  $\mu$ M PMA treatment, with standard Reaction Buffer or Reaction Buffer plus. PhAST Blue photoactivation 10 min, 100%.

Reaction Buffer Plus completely dims qPCR signal.

## Standard Reaction Buffer

For general purposes, neutral pH, and standard ionic strength.

## Reaction Buffer Plus

Contains anti-clumping agents, cell membrane fluidising agents and a reduced level of nutrients. Designed for stabilizing live cells while accelerating reagent diffusion through dead cells. Compatible with Enterobacteriaceae and Mycobacteriaceae.

## Anaerobic Reaction Buffer

Contains anti clumping agents and minimum nutrient levels in providing a reducing environment compatible with vPCR reagents. Designed for stabilizing anaerobic live cells but accelerating reagent diffusion through dead cells. Compatible with *Bifidobacteriaceae*.

## ORDERING INFORMATION

|                           |                     |
|---------------------------|---------------------|
| Standard Reaction Buffer  | Cat. No. 4900018000 |
| Reaction Buffer Plus      | Cat. No. 4900018001 |
| Anaerobic Reaction Buffer | Cat. No. 4900018002 |

(5 vials, containing 1,5 mL of 10x concentrated suspension)