

## Techne Prime Pro 48 Q & A



**1. Q. What qPCR reagents do Techne recommend?**

A. Techne supply a range of 400 probe-based qPCR speciation and detection kits, available with or without master mix. These kits are lyophilised (freeze dried) enabling ambient shipping conditions and providing an 18 month shelf life. Alternatively, good results have been obtained with Kapa Biosystems because the SYBR is fast and the Taq tolerates conditions which can inhibit other polymerases. However, the Techne Prime Pro 48 is an open system and is designed to accept any brand of reagents.

**2. Q. Do Techne provide an optional extended warranty?**

A. Yes, please contact your local Techne office for details [www.techne.com/enquiry.asp](http://www.techne.com/enquiry.asp)

**3. Q. What problems might I expect with pipetting small volumes?**

A. The Techne Prime Pro 48 accommodates a 48 well qPCR plate with well geometry identical to a 384-well. This smaller volume format is now common for molecular biologists due to the need for higher throughput and lower cost assays. No special training is required and a backlit plate loading dock is provided to make pipetting straightforward. If you have not used a 384-well plate or 16-channel pipette before, then it is just a newer and better technology that takes only a short amount of time to get comfortable with, especially when using it every day.

**4. Q. What is thermal shift?**

A. Thermal shift is a technique whereby protein is exposed to a dye which binds the folded protein emitting a specific wavelength of light. The dye and protein are then heated, denaturing the protein, and the dye falls off and so does the emission of signal. Prime Pro 48 can perform thermal shift assays as long as the dye is excited by 452-486nm and emits between 505-545nm and the assay start point does not go below 30°C. If this was to be the main application for the system special attention should be taken to these requirements.

**5. Q. Can we re-use Prime Pro plates and seals?**

A. This is not advised or recommended. However, you can reuse the unused wells in a plate if a real necessity. Run the initial plate and collect the data. Then very carefully cut off the plate seal to leave the used wells covered. Then fill an unused part of the plate and cover with a fresh seal. Never remove the seal completely as this significantly increases the chances of contamination. After PCR even the smallest aerosol will contaminate the neighboring wells. Please only re-use the plate once (two runs). The performance of the plastics with repeated cycling is not tested beyond this.



**6. Q. Why does Prime Pro 48 not have a block temperature gradient?**

A. A temperature gradient is not something Techne want in this qPCR system. Gradient means temperature differences across the block. Temperature differences means poor uniformity and poor uniformity makes poor quality data. Prime Pro only provides top quality MIQE compliant, highly uniform data. From a scientific perspective, primer annealing temperatures are optimised by the manufacturer, or optimised initially in end point thermal cyclers. Therefore, gradients are not usually required in qPCR.

**7. Q. Can Prime Pro 48 perform FRET?**

A. You can do FRET in the Prime Pro 48. It is basically a different type of probe called a hybridization probe, somewhat similar to Hydrolysis probes but with some differences. Users can utilize FRET probes in the Prime Pro 48 by selecting *Other* in the chemistry setup and then defining the correct phase for collecting the data, likely to be after extension phase with FRET probes.

**8. Q. Can Prime Pro 48 accommodate a 5<sup>th</sup> filter?**

A. Space exists for further filters but the need has not arisen to develop the software and algorithms to utilize this fifth channel.

**9. Q. Is the Techne Prime Pro 48 software compatible with the illumina Eco?**

A. You can use Techne software on older illumina units, but advise caution because neither Techne nor illumina have tested it and unforeseen bugs may exist or errors may occur, however unlikely. All future Techne software updates will be available free of charge.

**10. Q. Who sells the qPCR plates and seals?**

A. The plate and seal production is controlled by Bibby Scientific and the qPCR plates and seals are available through the Techne channel.

**11. Q. Does Prime Pro 48 support use of ROX/passive reference dye (PRD)?**

A. ROX and PRD are not required in the Prime Pro 48. The Techne system uniformity is so high that ROX/PRD is of little use. Some people talk about using ROX/PRD to remove pipetting errors but in most cases ROX is the last thing added so it only checks itself.