

# Pi<sup>π</sup> Technical Note 23

## DPD Measurement Checklist

### Introduction

Pi sells hundreds of electrochemical sensors every year and these are almost all calibrated using DPD test kits from reputable suppliers such as Palintest and Lovibond.

DPD test kits should always be used in compliance with their instruction manuals.

A significant proportion of Pi's service calls relate to problems with calibration and almost all of these are related to the use of a DPD kit, so Pi has developed this quick checklist to help you ensure that your calibration results from your DPD kit are as good as possible.

Check	Why?	✓
• Are my vials clean?	<i>Stained or dirty vials will interfere with the colorimeter, and will give an inaccurate result. The inside and outside of the glass must be free from anything that could block the light, including fingerprints and bubbles.</i>	<input type="checkbox"/>
• Is the glass stained pink?	<i>If coloured solution has been left in the vials, the glass can become stained. If your vials have been stained, a slight pink colour can be seen if held up to the light. This is not always obvious, vials can look clean and be stained.</i>	<input type="checkbox"/>
• Is the zero sample fresh? Is it the same as my measurement sample?	<i>The zero sample should be exactly the same as your measurement sample, simply without DPD added. Taking a fresh zero each time, ensures that factors like turbidity are properly accounted for.</i>	<input type="checkbox"/>
• Have I used the same vial for my zero as for my measurement sample?	<i>This minimises the error caused by imperfect glass.</i>	<input type="checkbox"/>
• Is my stirrer rod clean?	<i>This stops contamination from other samples.</i>	<input type="checkbox"/>
• Are my vials properly aligned?	<i>This minimises the errors caused by imperfect glass.</i>	<input type="checkbox"/>
• Have my DPD tablets been thoroughly crushed?	<i>This makes sure all of the DPD is available to react with the oxidant.</i>	<input type="checkbox"/>
• Has the unreacted DPD tablet been allowed to settle?	<i>This stops the extra turbidity from affecting the reading.</i>	<input type="checkbox"/>
• Is the DPD within date?	<i>DPD that is not in date may not give accurate readings.</i>	<input type="checkbox"/>
• Is your DPD test kit calibrated?	<i>DPD kits are known to drift over time, which gives rise to error.</i>	<input type="checkbox"/>



Palintest DPD Kit



Lovibond DPD Kit