

## Early detection of gas bubbles improves pump performance

### TESTA Analytical

has published a study that demonstrates how their Solvent Line Monitor is a valuable monitoring device for safeguarding HPLC, flow chemistry or liquid dosing systems from the many problems caused by undissolved gas bubbles.



### Dissolved gas

is known to impact the performance of peristaltic pumps. A common solution to address this problem with HPLC system, is to use a vacuum degasser on the inlet side of the pump. Vacuum degassers have been shown to be very efficient for removing dissolved gas, however they fail completely if any undissolved gas bubbles are transported along the tubing. In this scenario, undissolved gas bubbles pass the degassing device, unaffected by the vacuum, and will unfortunately reach your peristaltic pump leading to unreliability and subsequent errors in analytical results.

### In this study –

data is presented showing how dissolved gas can have an impact on the performance of peristaltic pumps. Data from further investigations is also presented that demonstrates the effect of undissolved gas bubbles on pump performance and how the novel Solvent Line Monitor device provides a straightforward way of eliminating the problems resulting from this effect.

### **The Solvent Line Monitor**

offers optical and acoustic alarm as well as a digital output which might be used to stop a chromatography or flow chemistry pump before an undissolved gas bubble can affect its operation. The compact and easy-to-use Solvent Line Monitor is programmable in terms of sensitivity, mode of operation and setting bubble detection alarms. The system set-up is a straightforward process using a highly intuitive PC-based app which is included with each Solvent Line Monitor. Gas bubble detection parameters including the minimum size, frequency and number of bubbles can be configured using the PC app which also provides facility for different actions to be taken once an alarm status is detected, for example a simple beep or a stop signal.

### **To read the in-depth study**

in full please visit [https://www.custom-chromatography.com/papers/008-011\\_Testa\\_Chrom\\_Article.pdf](https://www.custom-chromatography.com/papers/008-011_Testa_Chrom_Article.pdf). For further information on the Solvent Line Monitor please visit <https://www.custom-chromatography.com/technologies.html> or contact Testa Analytical Solutions on +49-30-864-24076 / [info@testa-analytical.com](mailto:info@testa-analytical.com).

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