



## Biotech- Removing bubble trouble from micro and nanofluidic systems

*Biotech Fluidics has developed **low volume online degassing** modules for **micro- and nanofluidic systems** used for life science applications including dispensing, diagnostics, drug screening, nucleic acid sequencing and tissue culture.*



**Image captions:** : DEGASi® PLUS MICRO low volume degasser

### **In most micro- and nanofluidic systems,**

the formation and accumulation of air or gas bubbles can be severely detrimental to their operation. Once a bubble is generated, it is also extremely difficult to remove. The presence of bubbles can cause aggregation problems with particles or proteins, can damage chemical functionalization of surfaces, and in cell culture, bubbles can lead to cellular death.

### **Robin Oz,,**

degassing product specialist at Biotech Fluidics, commented “We have observed how a single gas bubble in micro and nano liquid dispensers can impair their dispensing precision and accuracy. Removing dissolved gases from liquids prior to dispensing eliminates the risk of having bubbles in the fluidic channels”.



**Image captions:** Single cell lipid vehicles in liquid flow system where micro bubbles must be fully eliminated.

### He added

“Another microscale application where liquid degassing is crucial is Surface Plasmon Resonance (SPR) analysis. The sensing mechanism in SPR is heavily based on interactions between analyte and a functionalized surface. A bubble will create an obstruction on the surface, resulting in an irregular and non-specific signal and creating an abnormality in the resulting sensogram. Installing a low volume DEGASi online degassing module prior to liquid introduction to the SPR system completely negates this gas bubble problem”.

### The DEGASi® PLUS MICRO

from Biotech Fluidics is a low volume (100 µl per channel) degasser specifically designed for SPR and other micro- and nanofluidic system applications. The system removes dissolved gases from the mobile liquid phase thereby eliminating bubbles before they occur and removes oxygen which can interfere with UV detection methods. The system is available in 1-6 channel versions.

### To discuss

how to degas your micro- or nano fluidic application please contact Biotech Fluidics on + 46 300 56 91 80 / + 612-703-5718 / [robin.oz@biotechfluidics.com](mailto:robin.oz@biotechfluidics.com).

For further information on the DEGASi® PLUS MICRO degasser please visit <https://www.biotechfluidics.com/product/biotech-degasi-plus-micro-stand-alone-degasser-1-channel-100-%C2%B5l-systec-af/>.

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