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Two-parameter monitoring in a lab-on-valve manifold, applied to intracellular H2O2 measurements†

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This work introduces, for the first time, simultaneous monitoring of fluorescence and absorbance using Bead Injection in a Lab-on-valve format. The aim of the paper is to show that when the target species, cells immobilized on a stationary phase, are exposed to reagents under well-controlled reaction conditions, dual monitoring yields valuable information. The applicability of this technique is demonstrated by the development of a Bead Injection method for automated measurement of cell density and intracellular hydrogen peroxide.

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made out of 1.6 mm/0.75 mm (o.d./i.d.) Teflon® tubing (Upchurch Scientific, Oak Harbor, WA, USA). The holding coil