

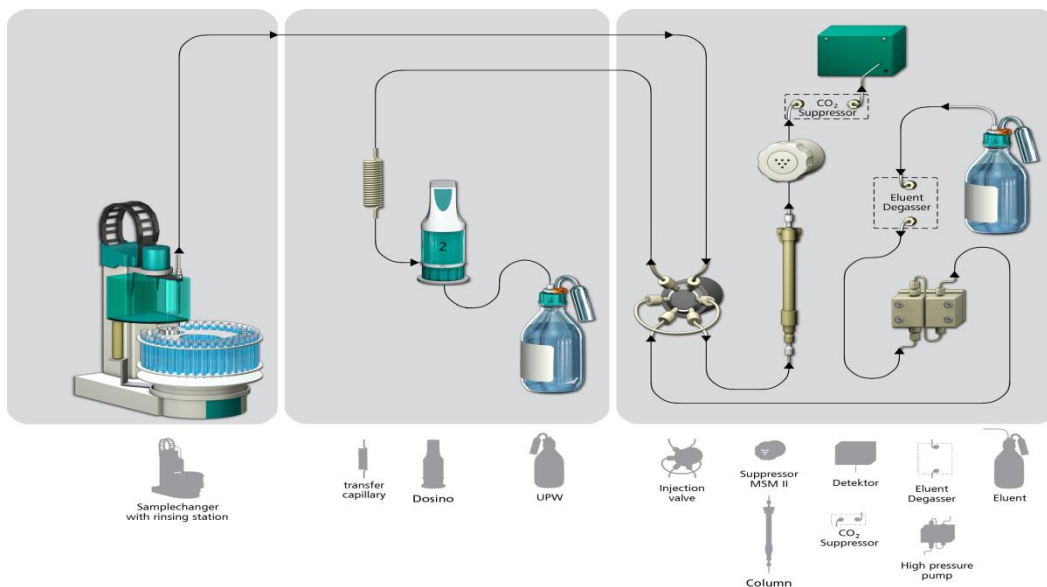
**Press Release: Metrohm intelligent Partial Loop (MiPT) Technique in Ion Chromatography**

Date: 12<sup>th</sup> July 2011

**When using ion chromatography, in order to avoid overloading of the separation column and achieve the best detection limits for analysis, it is often necessary to adjust the injection loop volume to the concentration of the sample.**

With the novel Metrohm intelligent partial loop technique (MiPT) it is possible to inject different sample volumes with just one fixed injection loop, which facilitates a broad range of sample concentrations to be analysed without any changes to the system and also to conveniently perform a multi-point calibration with just one multi ion standard. Due to the logical features of the MagIC Net controlling software, the partial loop technique can even be used as an alternative to intelligent dilution and could also be combined with other techniques such as ultrafiltration.

MiPT is a novel and unique setup that can be added to any 850 Professional IC, 881 Compact IC pro or 882 Compact IC plus in combination with the intelligent 800 Dosino in combination with the 856 Professional Sample Processor with rinsing station. The Dosino dosing unit allows sample volumes between 2-200µl to be injected quickly and precisely into the ion chromatography instrument and this principal can be applied to the calibration standards so that it is possible to prepare a mg l<sup>-1</sup> to µg l<sup>-1</sup> calibration with no handling of individual standards which can be both time consuming and introduce possible errors.



The 800 Dosino is used to aspirate an excess of sample through the injection valve into a buffer tubing to purge all sample lines. The injection valve is then switched to the fill position and an adjustable amount of sample (2-200µL) is transferred from the buffer tubing into the 250µl sample loop.

The injection valve is finally switched back to the inject position and the sample is introduced onto the separation column and analysed. The sample handling time is around 3 minutes and during the chromatographic run the buffer tubing is purged with ultrapure water. The rinse station located on the edge of the Sample Processor is essential for trace level analysis and rinsing of the needle with a fresh source of ultra-pure water each time. Tests have shown carry over to be less than 0.001% as a result of the reliable Dosino pull mode technique.

The versatility and convenience of MiPT allows sample concentrations in the range 1:10,000 to be analyzed with the same instrument configuration with no additional time consuming rinsing procedures between different kinds of samples and allows flexibility in when used in day to day laboratory work.

Change is good and Metrohm Inline Sample Preparation techniques such as MiPT save money, shorten the sample preparation time to reduce the analytical workload within the laboratory, extend the measuring range and improve the accuracy and reproducibility of the results

To learn more or discuss a particular application in more detail then please contact Metrohm on 01928 579 600 or email [info@metrohm.co.uk](mailto:info@metrohm.co.uk) or visit [www.ic-changeisgood.co.uk](http://www.ic-changeisgood.co.uk)

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**Note to Editors:**

Metrohm UK Ltd is the UK distributor of Metrohm AG, the leading manufacturer of Ion Analysis Instruments.

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