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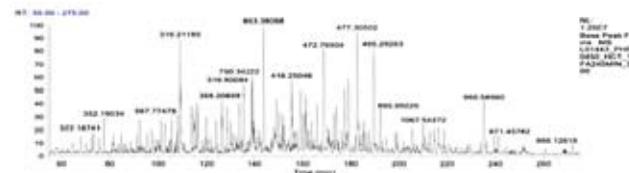


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## Proteomic and metabolic profiling applications

See more from less sample

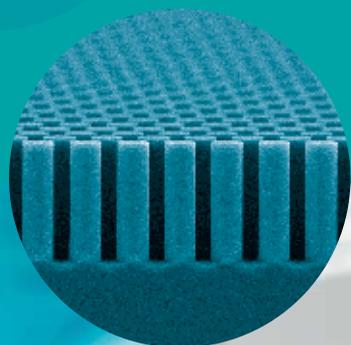
$\mu$ PAC<sup>®</sup> is optimally suited for proteomic and metabolic profiling applications where sample volumes are limited. Samples are diluted less during analysis and sensitivity is higher. The unrivalled separation power allows to detect minute concentrations of molecules of interest in complex mixtures for biomarker discovery or distinguish between molecules with small modifications (deamidations, glycosylations) for biopharmaceuticals development.



# μPAC®

## Pillar Array Column technology

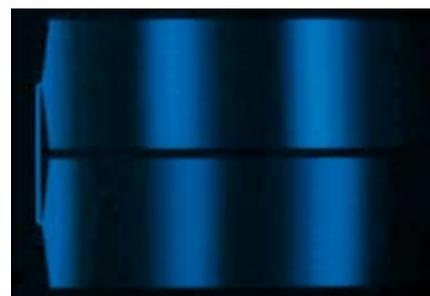
μPAC® is the first micro-Chip chromatography device that is manufactured using lithographic micromachining techniques. A perfectly ordered array of long and narrow pillars forms the backbone of the separation bed. This carefully designed pattern is created by etching interstitial volumes out of a silicon wafer.



## Flow distribution

### Keep the flow under control

Proprietary flow distribution structures are integrated in the μPAC® separation cartridges. These allow the transition from narrow in- and outlet tubing to much wider separation channels without introducing any significant peak dispersion. Dedicated turn structures allow the separation channel to be folded onto a small footprint by interconnecting concatenating segments.

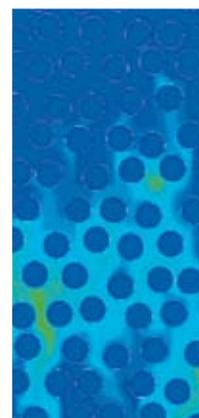


## Perfect order

### Sharp peaks

The high degree of order in the separation bed eliminates heterogeneous flow paths otherwise present in conventional columns, the so-called eddy dispersion. Flow through μPAC® columns adds very little dispersion to the overall separation. As a result, the peaks remain sharper, compounds remain concentrated and sensitivity is increased.

Packed bed



Pillar array

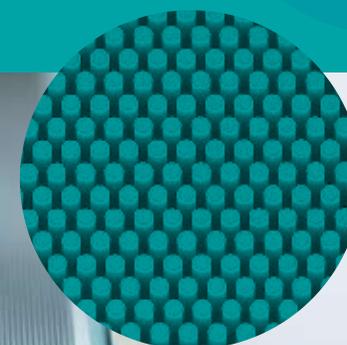


## Permeability

### Moderate pressure, maximum performance

The solid backbone forms a rigid structure that is not influenced by pressure. There are no obstructions by touching surfaces, and there is no risk for perturbations of the solid phase by pressure fluctuations.

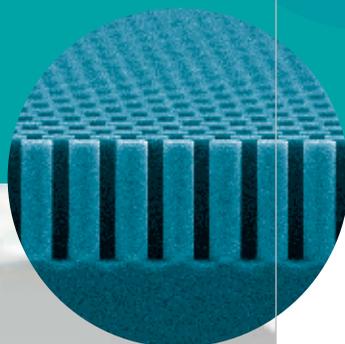
Because μPAC®s operate at moderate pressures (lower than 300 bar), separation channels of exceptional length are possible. These give the sample more time to interact with the stationary phase, leading to unrivalled separation power.



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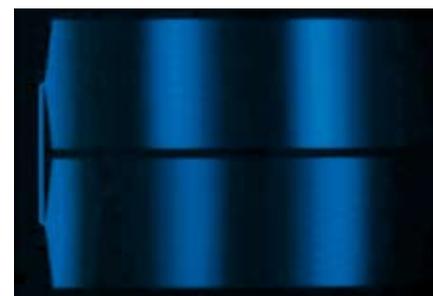
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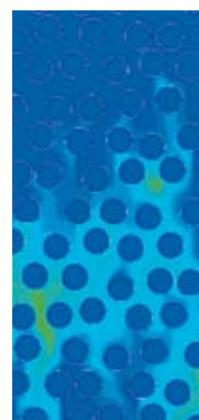


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