



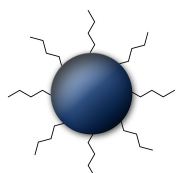
## MAGNAFACTS Newsletter 2008 - issue 4

### Magnetic reversed phase beads for clinical proteomics and biomarker validation

***We feel confident that our MagSi proteomics reversed phase beads speed up your proteomics work flow compared to pipette sample prep solutions. To get your confidence we will give an **25% discount** on any MagSi-proteomics volume until **30.11.2008**. Grab this chance! To get this discount, mention "fall promo" on your order.***

*This newsletter is to keep our customers and clients up-to-date of the progress in product and application development with MagnaMedics. In this issue we want to 1) give you an update about our current product development and 2) highlight MagSi-proteomics reversed phase beads applications like clinical samples. All our products are now available in our online shop at [shop.magnamedics.net](http://shop.magnamedics.net). If you do not want to receive future newsletters simply reply with "Stop" or inform us via [info@magnamedics.com](mailto:info@magnamedics.com).*

#### MagSi-proteomics



MagSi-proteomics beads are magnetic silica beads. The surface of the beads has been modified with true C4, C8 and C18 alkyl groups typical for reversed phase applications.

The MagSi proteomics C18 beads are an ideal tool for the purification, concentration and desalting of peptides and protein digests. Compared to other C18 filled pipette or column tools, desalting using MagSi proteomics C18 results in best quality MALDI TOF spectra at a reasonable price. A typical protein tryptic digest of up to 1 nmol in total can now be desalted at prices below 1 EUR without time consuming, home made column filling. MagSi proteomics reversed phase are also proofed in automated, robotics applications using microtiterplate (MTP) formats. The relatively high magnetic content of the beads guarantees high speed during magnetic separation and prevents carry over and cross contamination. For more information, see our [proteomics](#) part on our website.

For more information see [www.magnamedics.com](http://www.magnamedics.com)

To order, visit [shop.magnamedics.net](http://shop.magnamedics.net) and add "fall promo" to your order to receive a 25% discount on MagSi-proteomics products.

MagnaMedics provides you with technical assistance and back-up support by highly qualified Application Scientists. For prompt advice on cell separation, molecular and protein applications, please contact our **Technical Support**.

All countries:

eMail: [support@magnamedics.com](mailto:support@magnamedics.com)

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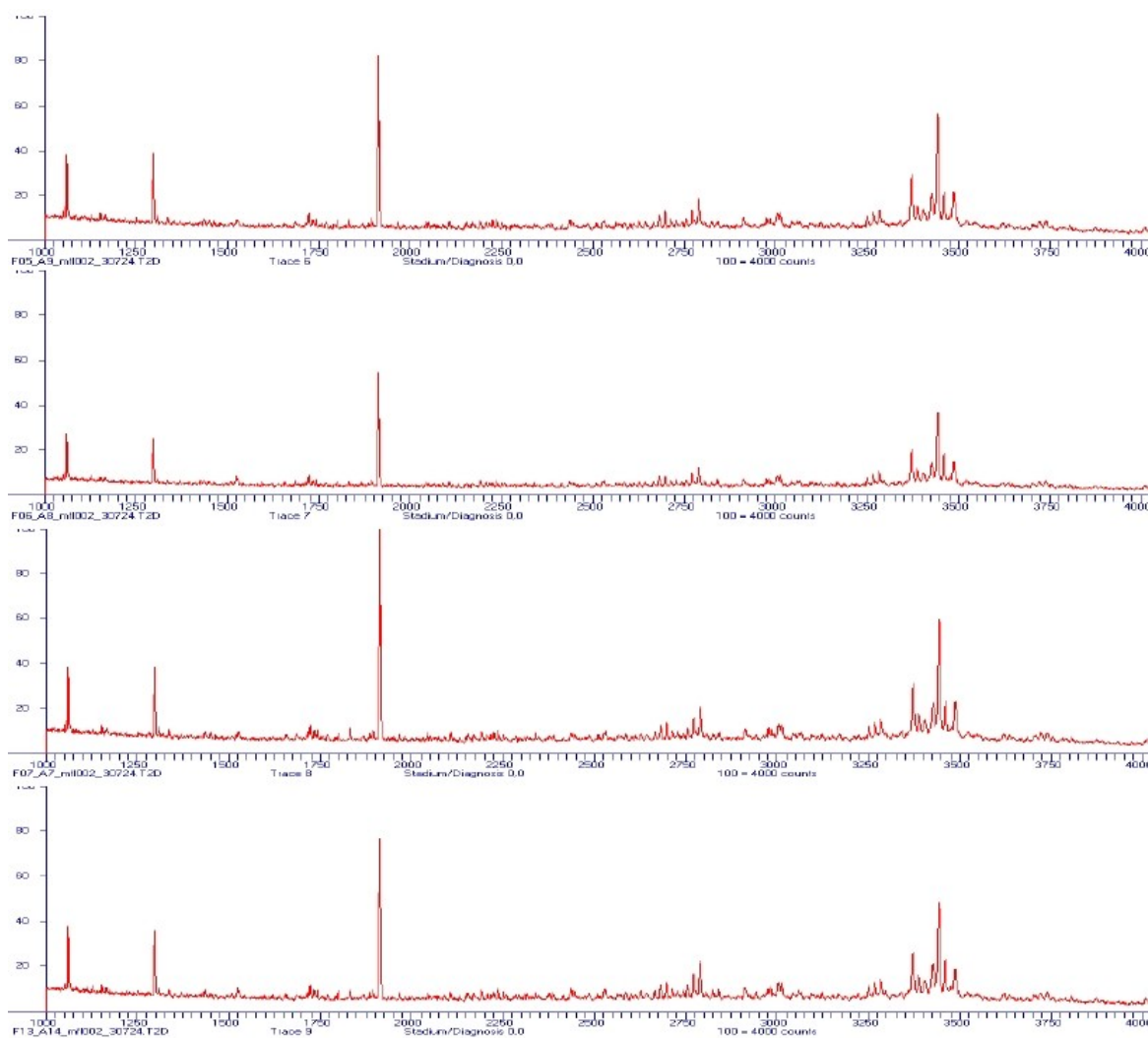
See you on MEDICA between 19<sup>th</sup> and 22<sup>nd</sup> of November 2008 in Düsseldorf. Make an appointment under +31.(0)43.38.85850 or under [info@magnamedics.com](mailto:info@magnamedics.com)



## Product update.

### ***Spot to spot reproducibility***

Especially in clinical proteomics but also in other proteomics applications the reproducibility of the results from sample to sample (or spot to spot) becomes very important. Therefore clients of us (Digilab BioVisioN GmbH & Co. KG, Hannover) have tested the spot to spot reproducibility using MALDI TOF TOF as read out. Human urine was used as clinical sample. Figure 1 shows the results of this study.



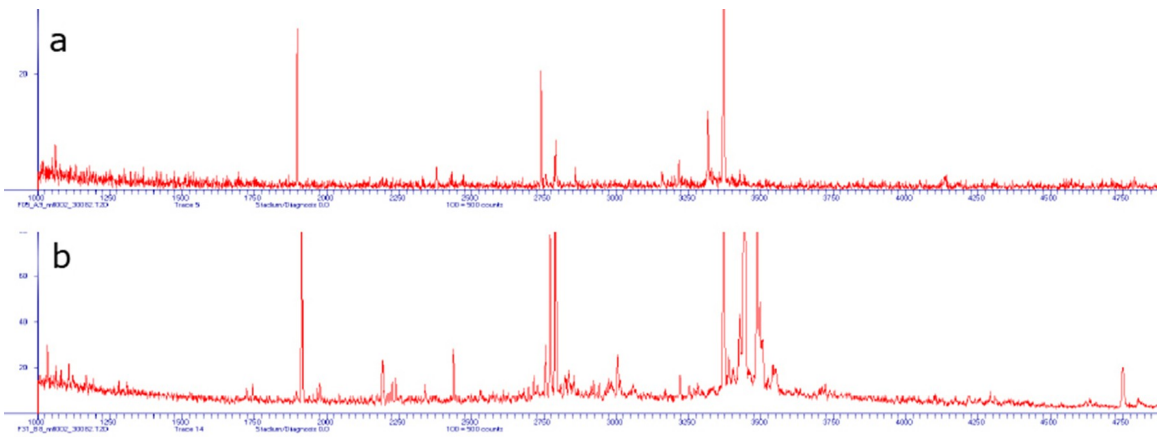
**Figure 1.** Spec to spec reproducibility using 1  $\mu$ l human urine sample per spot. All spectra were set to 100 % representing 4000 absorbance units.



**Fractionation of urine sample: MagSi proteomics vs. ZipTips**

Furtheron Digilab tested also the MagSi proteomics C18 reversed phase beads directly vs. ZipTips C18. But read the clients comments on these testings:

"At first, the handling of the MagSi proteomics beads was very comfortable. After sample setting on the magnet, all magnetic beads were precipitated in a few seconds at the tube wall. On the basis of MALDI mass spectra, first approaches seemed to show that the recovery of MagSi proteomics beads are more effective in contrast to the ZipTips." Senior scientist Digilab, Han.



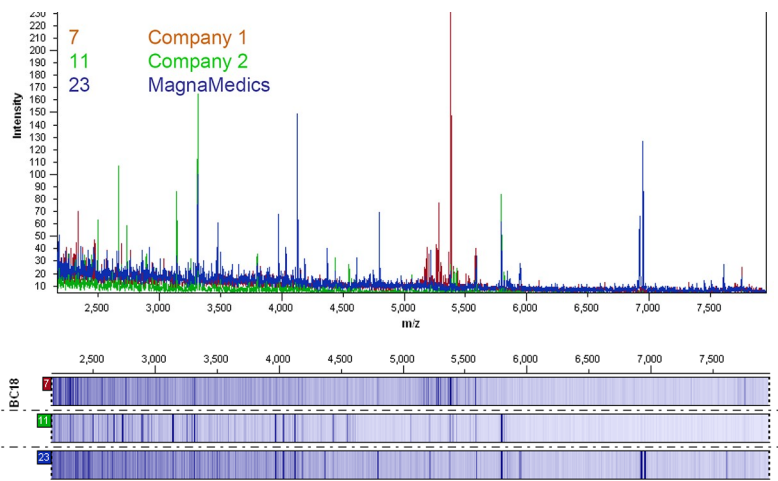
**Figure 2.** Zoom in of MALDI mass spectra (m/z 1000 – 5000 of Zip Tip C18 prepared sample of urine (a.) and extractions with MagSi proteomics C18 beads (b.). Measurements were done in linear mode

**Fractionation of saliva samples**

At UCLA Dr. James LeBlanc tested our MagSi proteomics beads in comparison to two competitor reversed phase magnetic beads. Protein profiles from saliva samples were measured using solid phase extraction (SPE) in an step gradient with acetonitril (ACN) and subsequent analysis

with MALDI-TOF. Sample preparation was performed in MTP format using tecan robotics.

Using the MagnaMedics C18 beads, 20 peptides could be annotated in the 80% ACN fraction. The two reference beads only revealed 8 and 12 peptides respectively.



**Figure 3.** Spectra of peptides after elution with 30% acetonitrile. MagnaMedics C18 beads show 23 annotated proteins (blue) as compared to the two reference beads, 7 (red) and 11 (green) respectively.