A Universal System for Scouting Chromatography Media

Most suppliers of chromatography products have understood that if you want to sell media to busy process developers, you need to sell it in a format that accommodates their normal workflow. As a result, we now have a profusion of scouting cartridges in all shapes and configurations. This is a big step forward from having to pack our own columns but **Atoll GmbH**, a new company in Weingarten Germany, has taken the concept ***three*** steps further.

Evolutionary Step Number 1. Now you can evaluate media from all vendors in the same format; no concerns about different column diameters, different bed heights, contributions from different frit materials or other housing components. If you see different results you can be confident that they reflect real differences among the media and not column design artefacts. Atoll can provide any media in their MediaScout® MiniChrom columns. Their MiniChrom 5-25 has a diameter of 5 mm, a height of 25 mm, and a volume of 0.5 mL. Their 5-50 has a volume of 1.0 mL and their 11.3-50 a volume of 5.0 mL. All support flow rates up to 1500 cm/hr, with a maximum operating pressure of up to 30 bar.

Evolutionary Step Number 2. One of the lessons learned from packing media in large scale columns has been that some degree of axial compression usually needs to be applied to a packed bed in order to obtain its best performance—and to achieve *consistent* performance. Each type of media has its ideal compression factor. Atoll columns are individually flow packed to provide the correct compression factor for each type of media so that you can achieve accurate process modelling.

Evolutionary Step Number 3. The foundation of a robust purification procedure is a thorough evaluation of qualified media candidates over whatever range of conditions is necessary to characterize their fractionation performance. The amount of time and labor required to conduct scouting of this scope on a column by column basis is beyond the resources available to many process developers. Atoll offers the means to transcend this compromise. The MediaScout System supports parallel processing with a 96 well plate that accommodates their MiniColumn cartridges. This allows you to evaluate performance on properly packed columns, not just some loose resin in a porous well. You can induce flow with a centrifuge, positive displacement pipettor, or by fixed tip as with a TECAN Freedom EVO system. Whether you choose to automate your scouting or keep it simple, Atoll's system makes high throughput process development accessible to everyone.

Pete Gagnon.

For more information, visit Atoll's website at http://www.atoll-bio.com