PEEK-lined stainless steel capillaries with 25 µm i.d. for UHPLC connections rated to 15,000 psi. Tubing is offered in precut lengths. **IDEX** used **Upchurch Scientific** (www.upchurch.com) VHP fittings and developed a "tipping" process to make sure that the liquid goes down the through-bore and not between the PEEK and stainless steel. For larger-diameter tubes such as columns, PEEK lining also provides a smoother surface compared to drawn stainless steel, which shows up as superior column efficiency. In one test, the PEEK column provided 20% higher peak area (i.e., recovery) than the corresponding stainless steel column.

Preparative LC system

The Prep 150 LC from **Waters**, designed for lab-scale preparative separations, has an F_{max} of 150 mL/min, which is suitable for Waters OBD™ prep columns with 10–50 mm i.d.

Evaporative light scattering detector

Evaporative light scattering detection (ELSD) for analytical applications is well established. Previously, **Sedere** (www.sedere.com) extended its range with the SEDEX LT series for low-temperature detection. This year, the company introduced the SEDEX LT Model FP for flash and preparative applications, including LC and SFC. The compact detector appears to be at a new price point for ELSDs.

HPCE system

Some may recall the PrinCE HPCE (high-performance capillary electrophoresis) system. It was the brand name of an elegantly simple CE designed and built in The Netherlands under the guidance of Dr. Henk Lauer. At Pittcon, **Prince Technologies** (www.princetechnologies.eu) introduced the PrinCE NEXT 800, described as the "New platform from the CE technology leaders." Unique features include: 1) Pressure injection from 96-well plates for improved accuracy; 2) temperature control of the capillary, sample, and buffer; 3) open design in anticipation of adding a flow cell from an external detector such as fluorescence; 4) flexible capillary length, including ultrashort for high speed; and 5) easy integration with automated liquid and plate handling robots.

Handheld CE analyzer

Analysis of glycans usually is run on an HPLC, often with MS detection. Run times for Dp1 to about Dp25 ladders are almost an hour. **BiOptic Inc.** (www.bioptic.com) introduced a small handheld CE analyzer, called the GL1000, that provides similar resolution to HPLC but with a run time of only 5 min. This improves productivity by a factor of 10, to say nothing of the cost. Detection is with fluorescence.

Capillary electrophoresis platform

In the **Beckman Coulter** (www.beckmancoulter.com) booth, emphasis was on applications of the PA 800 *plus* capillary electrophoresis platform. One application note was entitled, "Analysis of Monoclonal Antibody Charge Variants with Capillary Zone Electrophoresis." Charge variants affect the pI of the antibody. These can arise from post-translational modification deamidation, lysine modification, and errors in transcription, etc. **Beckman** developed a method that provides quick separation of acidic and basic charge variants from the parent monoclonal antibody in 12 min with a 20-cm capillary. If higher resolution of the individual peaks is of interest, doubling the capillary length increases resolution dramatically, at the expense of longer migration time (~38 min).

Another application note from **Beckman** discusses improving quantitative analysis of erythropoietin (EPO) by replacing a slab gel protocol with HPCE. This is documented in the *European Pharmacopoeia*. Still another application note showed interesting fingerprints of white and red wines. I'm sure that the CE profiles could be correlated with taste, but this was was not included in the report.

Conclusion

Some Pittcons are remembered for their surprises. For Pittcon 2013, this was especially true since I'd lived the early days. Many of the people involved are still active and respected professional friends. However, as surprising as the ACQUITY APC was, I expect even more in the next few years. So, I plan to see you next year from March 2 to 6 in Chicago.

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