

## **Advances in HPLC Separations using Graphitized Carbon Particles**

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A porous, graphitic carbon (PGC) has been synthesized for use as a stationary phase in high performance liquid chromatography (HPLC). The graphitic carbon is manufactured by impregnating a porous silica template with a proprietary copolymer. The polymer is then carbonized and the silica template removed prior to graphitization. It has exhibited strong HPLC retentive properties, including a unique selectivity for small, polar analytes. PGC is stable throughout the entire pH range of 0-14, exhibits excellent mechanical strength, and is compatible with all solvent systems. With this material, the existing PGC technology has been improved upon in a few ways. Most notably, particle size distribution has been tightened and theoretical plate count has been increased, while maintaining good separation characteristics. This poster will highlight the capabilities of PGC and its ability to separate compounds classified as difficult to separate by conventional silica-based HPLC, as well as its use in translating problematic, non-reproducible, or non-mass spectrometry (MS) compatible methods into much more user-friendly methods.