

# IMPAQ®



## IMPAQ®

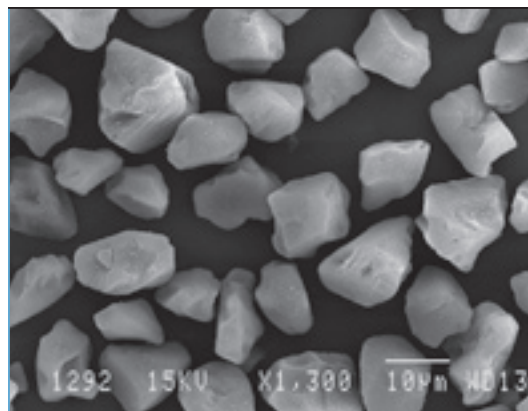
Spherical silica materials are the best performing supports for HPLC applications but they also are the most expensive. The IMPAQ® angular silica gel is the spherical alternative for preparative applications. IMPAQ® silica gels provide very efficient separations at much lower price. IMPAQ® is premium grade angular silica designed for High Performance Liquid Chromatography (HPLC) and other applications where consistent high purity and narrow distribution of pores and particle dimensions are required. It is the only non-spherical product performing successfully in large-scale HPLC applications. IMPAQ® is a fully porous gel in which the surface area, porosity and rigidity have been optimized for loading capacity and mechanical stability.

### Characteristics:

This cost efficient material has an irregular particle shape with smooth edges and a very narrow particle size distribution. The high specific surface area (500 m<sup>2</sup>/g for 60 Å pore size) allows the improvement of loading capacities for reversed-phases.

For irregular support, the average diameter is calculated by defining an equivalent average spherical diameter. From the following scanning electron microscopy (SEM) picture, it is easy to see the tight particle size distribution of this material, which is much better than standard silica and comes close to spherical silica. The graph presented on the next page shows two Microtrac analysis of a 10 µm IMPAQ® silica gel synthesized in 2002 and another one synthesized in 2004. It is easy to appreciate the batch-to-batch reproducibility of the synthetic method.

By carefully controlling the particle size of the silica precursor prior to the condensation we are able to greatly improve the robustness of the finished product. After the grinding and sieving steps are performed, there are extra steps to smooth out the edges to make the product pressure tolerant for HPLC applications. Fine particles generation is thus greatly reduced.



SEM picture of a 10 µm IMPAQ® silica gel

IMPAQ® angular silica supports available and their characteristics (FORMATS: 100g, 1kg\*)

	Product Number	Particle size (µm)	Pore size (Å)	Specific surface area (m <sup>2</sup> /g)
UltraPure IMPAQ®	B10005B	5	60	500
	B10007B	10	60	500
	B10009B	20	60	500
	B10025B	40	60	500
	B10005E	5	100	400
	B10007E	10	100	400
	B10009E	20	100	400
	B10025E	40	100	400
	B10005J	5	200	235
	B10007J	10	200	235
	B10009J	20	200	235
	B10025J	40	200	235

All SiliaBond® functions presented on pages 32 to 60 are available on IMPAQ®

Particle size comparison of two batches

