

9.2.3 Terms Related to the Chromatographic Process and the Theory of Chromatography

9.2.3.1 The Chromatographic Medium

Active Solid

A solid with sorptive properties.

Modified Active Solid

An active solid the sorptive properties of which have been changed by some treatment.

Solid Support

A solid that holds the stationary phase but, ideally, does not contribute to the separation process.

Binders

Additives used to hold the solid stationary phase to the inactive plate or sheet in thin-layer chromatography.

Gradient Layer

The chromatographic bed used in thin-layer chromatography in which there is a gradual transition in some property.

Impregnation

The modification of the separation properties of the chromatographic bed used in planar chromatography by appropriate additives.

Packing

The active solid, stationary liquid plus solid support, or swollen gel contained in a tube.

Totally Porous Packing

Here the stationary phase permeates each porous particle.

Pellicular Packing

In this case the stationary phase forms a porous outer shell on an impermeable particle.

Particle Diameter (d_p)

The average diameter of the solid particles.

Pore Radius (r_p)

The average radius of the pores within the solid particles.

Liquid-Phase Loading

A term used in partition chromatography to express the relative amount of the liquid stationary phase in the column packing. It is equal to the mass fraction (%) of liquid stationary phase in the total packing (liquid stationary phase plus support).