Interaction is influenced strongly by the kosmotrope or chaotrope nature of the salt components in the mobile phase. Starting salt concentration is a chromatographic technique in which the sample interacts at high concentration. This is a chromatographic technique in which the sample interacts at high concentration. The strength of the hydrophobic interaction is influenced strongly by the ligand. The adsorbed molecule is eluted through a change in pH or ionic strength.

Two AFC resins are predominantly used for bioseparation:
- Protein A chromatography has become a widely used platform in monoclonal antibody (mAb) purification.
- Protein A chromatography has become a widely used platform in monoclonal antibody (mAb) purification.

Mixed-Mode Chromatography resins have both ionic and hydrophobic groups in their composition. These unique ligands allow the separation of acidic, basic, and neutral proteins by one resin.

Mixed-Mode Chromatography requires more attention, as both ionic strength and pH have a non-linear impact on the binding and elution. Use of high-throughput method development tools combined with Design of Experiment help develop more robust methods.

Biomolecules generally have charged groups on their surfaces. This is the basis for Ion Exchange Chromatography (IEC). In which the molecule reversibly binds to an oppositely charged group of the packing material.

The bound sample may be selectively removed from the stationary phase by changing the pH or salt concentration of the mobile phase. The higher the change of the molecule and the stronger the binding to the stationary phase, the greater is the change in the salt concentration required.

IEC is a very powerful separation tool because it is highly selective and specific and has a high capacity. Modern resins offer salt-tolerance capabilities, allowing to remain at physiological conditions, avoiding denaturation of the target molecules.

Chromatographic separations using hydroxyapatite involve non-specific interactions between molecules through weak ion exchange or calcium metal affinity, cation exchange with phosphate sites and hydrogen bonding with hydroxyl groups. Key applications for use of Ca-Pure-HA include the purification of monomolecular and polycrystalline antibodies, including IgG, IgM, antibody fragments, fusion- and phosphoproteins, and the separation of single-stranded and double-stranded DNA.