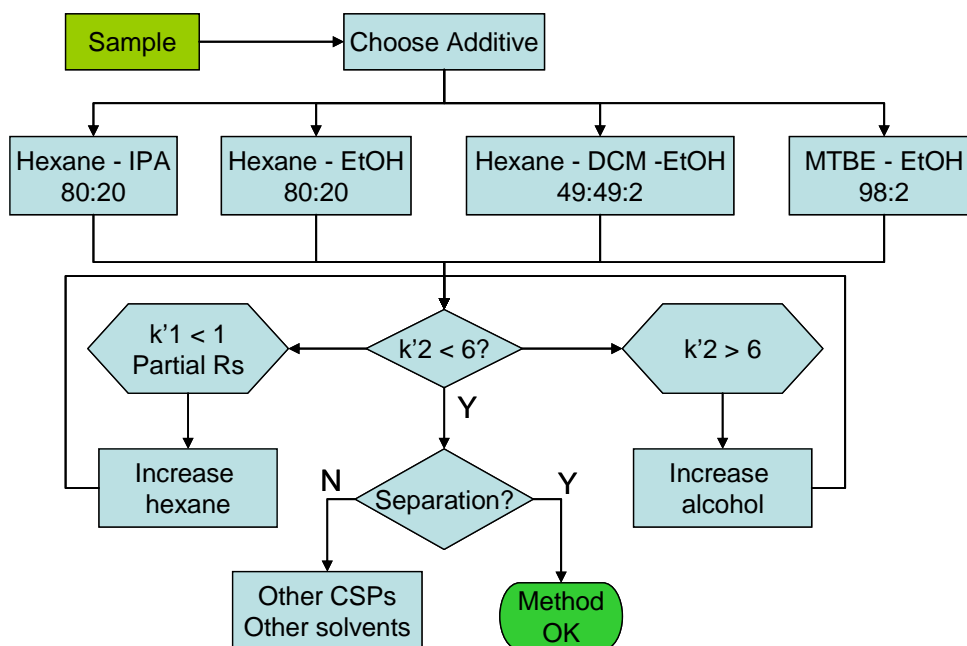
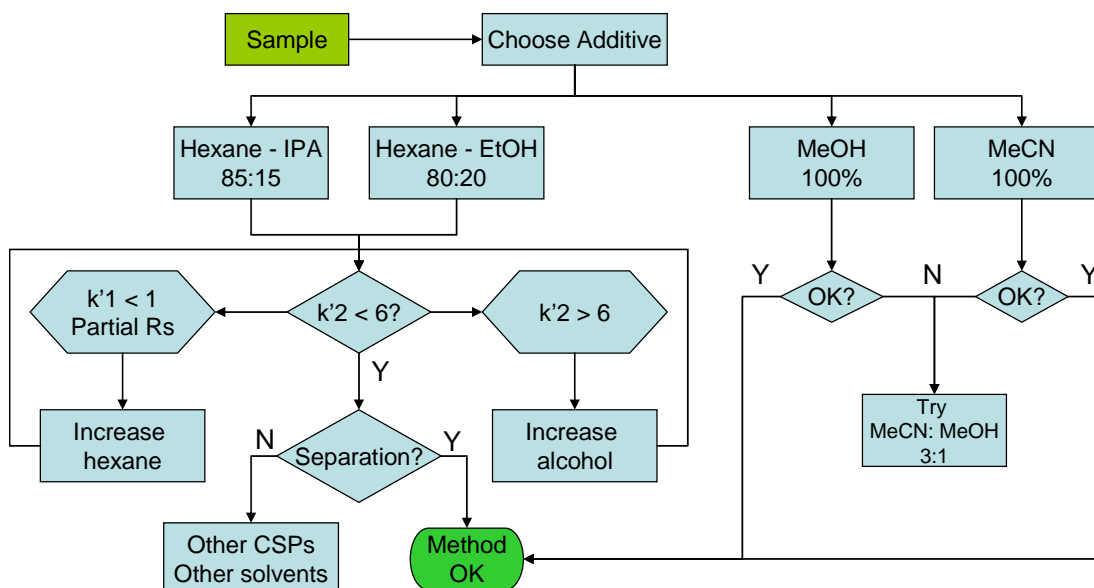


## Method Development – Immobilized Phases



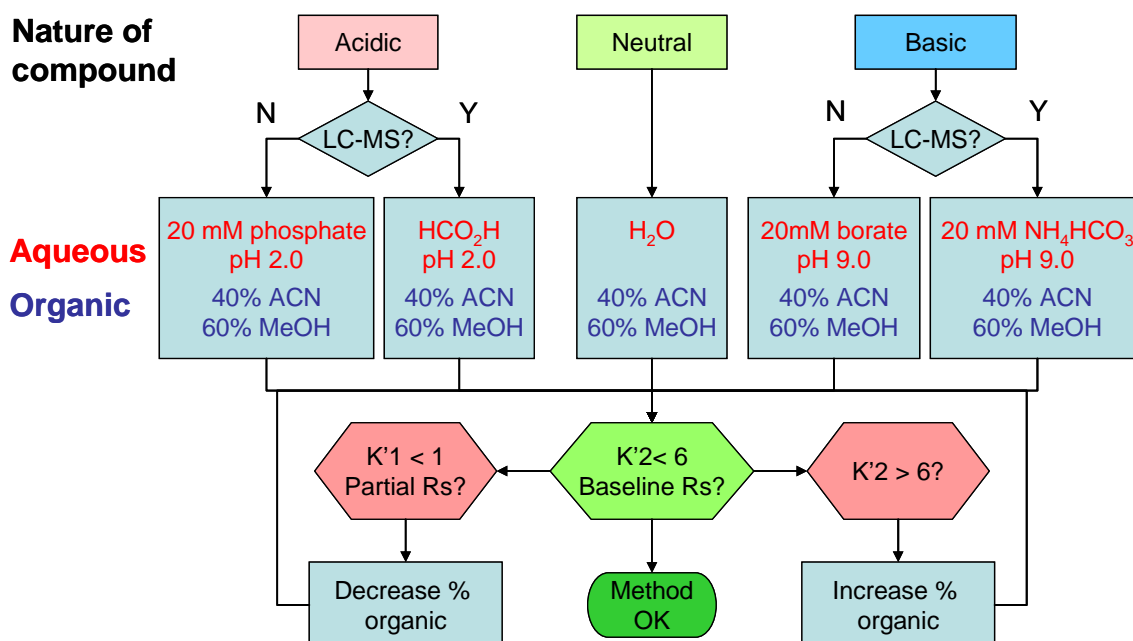
- Use: CHIRALPAK® IA™, CHIRALPAK IB™ and CHIRALPAK IC™
- Choose an appropriate additive – TFA for acidic compounds (eg carboxylic acids); DEA or TEA for basic compounds. ESA may be used for either acids or bases.
- Either:
  - Use starting conditions as in the diagram
  - Run scouting experiment to gauge solvent strength required (can be elution gradient)
- Find separations that show some selectivity
- Adjust solvent strength to obtain reasonable retention factor ( $1 < k' < 6$ )
- If insufficient separation try
  - Hexane : THF
  - Hexane : ethyl acetate
  - Alternative coated phases (eg CHIRALCEL® OJ-H™ or CHIRALPAK AS-H™)

## Method Development – Coated Phases



- Use: CHIRALPAK® AD-H™, CHIRALPAK AS-H™, CHIRALCEL® OD-H® and CHIRALCEL OJ-H™
- Or CHIRALPAK AD-3™ and CHIRALPAK OD-3™ in place of AD-H and OD-H
- Choose an appropriate additive – TFA for acidic compounds (eg carboxylic acids); DEA or TEA for basic compounds. ESA may be used for either acids or bases.
- Run screen with solvent compositions above; adjust hexane – alcohol ratio to obtain  $1 < k' < 6$ .
- If no retention on polar solvents (MeOH & MeCN) there is nothing much to do
- If there is retention but inadequate separation in polar solvents try MeCN – MeOH or MeCN – IPA mixtures
- If no separation in non-polar solvents (hexane – IPA; Hexane – MeOH) try other coated phases
  - CHIRALCEL OB-H™, CHIRALCEL OC-H™, CHIRALCEL OF™, CHIRALCEL OG™ or CHIRALCEL OK™
  - Try other additives (if DEA, try ESA or cyclic amines)

## Method Development - Reversed Phase



- Use: CHIRALPAK® IA™, CHIRALPAK IB™, CHIRALPAK IC™, CHIRALPAK AD-RH™, CHIRALPAK AS-RH™, CHIRALCEL® OD-RH™, CHIRALCEL OJ-RH™
- Or CHIRALPAK AD-3R™ and CHIRALCEL OD-3R™ in place of AD-RH & OD-RH
- Choose starting pH & buffer according to sample type and application (if LC-MS or not)
  - Either:
  - Start with 40% ACN and 60% MeOH
- Run gradient to establish solvent strength required
- Adjust % organic and / or pH to adjust retention
- If no separation
  - If acid, try Lindner phases
  - If basic, try ion-pairing with ESA