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## **OPERATING INSTRUCTIONS FOR (R,R) AND (S,S) P-CAP and P-CAP-DP STATIONARY PHASES**

### **1. Column Installation**

Columns are shipped in methanol. The column test standard is 1,1'-bi(2-naphthol) and mobile phase ACN/MeOH/TFA: 95/5/0.1 (v/v/v) for P-CAP and Benzoin in EtOH/Hexane: 20/80 for P-CAP-DP.

### **2. Conditioning**

New columns should be conditioned with at least 25 column volumes (~75 mL/25cm) of ACN/MeOH/NH<sub>4</sub>OAc 50/50/20mM (v/v/c) at 1.0 mL/min in order to achieve stable baseline.

### **3. Mobile Phases**

P-CAP and P-CAP-DP phases are especially designed for normal phase chiral separations. The (R,R) and (S,S) forms of these columns will reverse elution orders of two enantiomers of a compound. All common HPLC organic solvents, such as ACN, MeOH, EtOH, CH<sub>2</sub>Cl<sub>2</sub>, and Hexanes are compatible with these phases. Organic salts (like NH<sub>4</sub>OAc), organic acids and bases can be used as mobile phase additives.

Best starting mobile phase conditions

1. 50/50; EtOH/Hexane
2. 70/30; ACN/MeOH

### **4. Optimization**

To sharpen peaks and/or shorten retention times add 0.1% TFA or 0.1% DEA to mobile phase 1 or 2 or 10mM NH<sub>4</sub>OAc to mobile phase 2.



## 5. General Operating Parameters

| Parameter                             | Range                    | Typical                                     |
|---------------------------------------|--------------------------|---|
| Flow Rate                             | 0.5-2.0 mL/min           | 1.0 mL/min                                  |
| Pressure                              | Up to 3000 psi (200 bar) | 650-1800 psi<br>or 45-125 bar at 1.0 mL/min |
| Temperature                           | Up to 60°C               | Room Temperature                            |
| Injection Volume<br>and Concentration | 1-5 µL of a 1 mg/mL      | 5 µL of 1 mg/mL                             |

## 6. Stability

P-CAP and P-CAP-DP are stable to the addition of either 0.1% TFA or 0.1% DEA to organic mobile phase compositions.

## 7. Storage

When analysis is complete, columns should be washed with Methanol and stored in this mobile phase.

**NEVER STORE THESE PHASES IN ANY MOBILE PHASE CONTAINING SALTS, ACIDS AND BASES. WASH WITH METHANOL, THEN STORE IN METHANOL.**



P-CAP is manufactured under license from La Sapienza, Università degli Studi di Roma.

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