Reveleris® X2 Flash Chromatography System in Purification of Galla Chinensis (Wubeizi)

Introduction

Crude plant extracts have various compounds that may interfere with bioassays or are common constituents of plant extracts. Galla chinensis, a traditional Chinese medicinal plant, contains complex components that have been studied for antibacterial and antioxidant properties.

**Extraction Conditions:**
- **Extract Type:** Pulverized
- **Weight:** 6g
- **Extraction Solvent:** Ethanol
- **Solvent Volume:** 60mL
- **Ultra-sonication:** 30 min

**Flash Chromatography Conditions:**
- **Cartridge:** Reveleris® silica 12g
- **Solvent A:** Hexane
- **Solvent B:** Ethyl acetate
- **Flow Rate:** 25mL/min
- **UV1 Wavelength:** 254nm
- **UV2 Wavelength:** 280nm
- **Cartridge Equilibration:** 4.0 min
- **Injection Type:** Liquid

**HPLC Chromatography Conditions:**
- **HPLC System:** Agilent 1100
- **Column:** Alltima™ silica 5um, 250 x 4.6mm, Part No. 88171
- **Flow Rate:** 1mL/min
- **Detector:** UV@280nm
- **Mobile phase:** A: 1% Formic acid in hexane
  - B: Ethyl acetate

**Gradient Table**

<table>
<thead>
<tr>
<th>Step</th>
<th>Time (min.)</th>
<th>%B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>15.0</td>
<td>100</td>
</tr>
<tr>
<td>3</td>
<td>5.0</td>
<td>100</td>
</tr>
</tbody>
</table>

**Conclusion**

Reveleris® cartridges provide greater loading capacity, allowing the use of smaller size cartridge beds and thus helping to reduce cost. As peaks are well resolved during separation, fractions can be isolated with high purity and recovery. Traditional flash chromatography would also fail to detect the early eluting non-chromophoric components as purified by the RevealX™ technology using the Reveleris® X2 flash chromatography system.

www.discoverysciences.com

W. R. Grace & Co.-Conn.
7500 Grace Drive, Columbia, MD 21044