

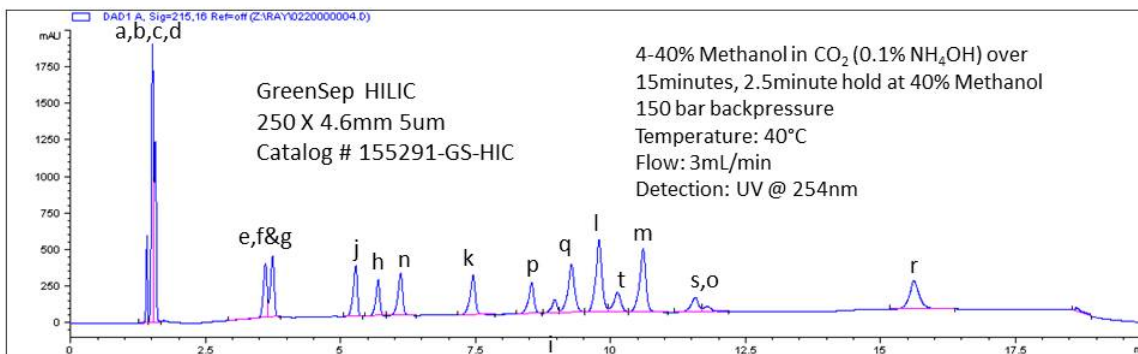
APPLICATION NEWS

GreenSep™ HILIC SFC Columns

GreenSep™ *HILIC* - Supercritical fluid chromatography (SFC) is a powerful chromatographic technique for the separation of complex mixtures. It has been useful in the areas of preparative chromatography and rapid analysis chromatography. Many SFC separations have been forced to utilize older types of stationary phases from “normal phase” HPLC such as unmodified silica, diol, amino and cyano. These phases are poorly adapted to SFC and present a number of limitations for SFC separations. Limitations include: low capacity, poor selectivity, and poor peak shape for SFC separations.

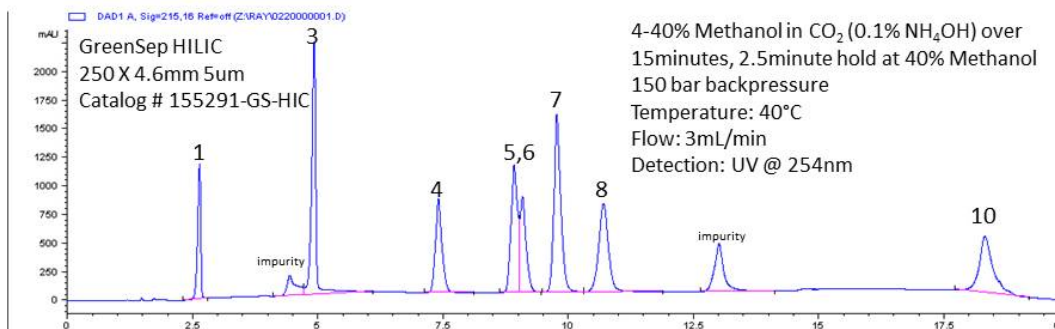
At ES Industries we have developed a new line stationary phases specifically engineered for SFC separations, one of these phases is GreenSep HILIC. This stationary phase has proven superior to conventional stationary phases (such as diol, cyano etc...) in the areas of separation selectivity, peak shape and loading capacity. GreenSep HILIC is a new stationary phase for SFC chromatography. It is composed of a polyhydroxylated polymer coated and bound to silica. This composition provides hydroxyl levels that are well above conventional hydroxyl and diol type stationary phases. GreenSep HILIC is specifically designed for SFC chromatography and can achieve high performance separations, yield rugged methods and deliver long column life times. The chromatograms shown below are prime examples of the superior separation performance obtainable with the GreenSep HILIC column with SFC. GreenSep HILIC is an alternative to and provides different selectivity when compared to other SFC optimized stationary phases. GreenSep HILIC is the SFC column of choice for the retention and rapid separation of chemical containing a variety of functional groups. GreenSep HILIC can easily replace conventional stationary phases used in SFC and deliver superior performance.

Test Mix



- | | |
|----------------------|--------------------------|
| a. Benzylbenzoate | k. niacinamide |
| b. naphthalene | l. 1-aminoisoquinoline |
| c. 2-nitrophenol | m. propanolol |
| d. 4-nitrotoluene | n. ketoprofen |
| e. caffeine | o. hypoxanthine |
| f. sorbic acid | p. 4-hydroxybenzoic acid |
| g. ibuprofen | q. 3-hydroxybenzoic acid |
| h. antipyrin | r. sulphiride |
| i. oxprenolol | s. sulfaquinoxaline |
| j. N-benzylbenzamide | t. niflumic acid |

Amine Mix



1. N-benzylidene-1-naphthylamine
3. noscapine
4. trimipramine
5. amitriptyline
6. clomipramine
7. 1-aminoisoquinoline
8. nortipyline
10. 3,4-diaminopyridine