

Naringenin is a chiral flavonoid found in foods such as tomatoes and citrus. In vivo studies have shown positive health effects such as anti-inflammatory, anti-bacterial, anti-tumor, and antioxidant properties. One limitation of current studies is the lack of chiral characterization. While it is known that the S enantiomer is the natural product, the ratio of enantiomers in foods has not been studied. There is no data as to whether S-naringenin's enantiomer has positive or negative effects. To better characterize naringenin as a potential pharmaceutical, a detailed method is presented here for the chiral analysis of racemic naringenin using Cosmosil CHiRAL series HPLC columns.

Acquisition Method

Column: COSMOSIL CHiRAL A, B or C
Column Size: 4.6 x 250 mm
Mobile Phase: Water : Acetonitrile = 35 : 65
Flow Rate: 1.0 mL/min
Temperature: 50 Celsius
Detection: UV 275
Sample: Racemic Naringenin 1 mM in ethanol
Inj. Vol.: 1 μ L

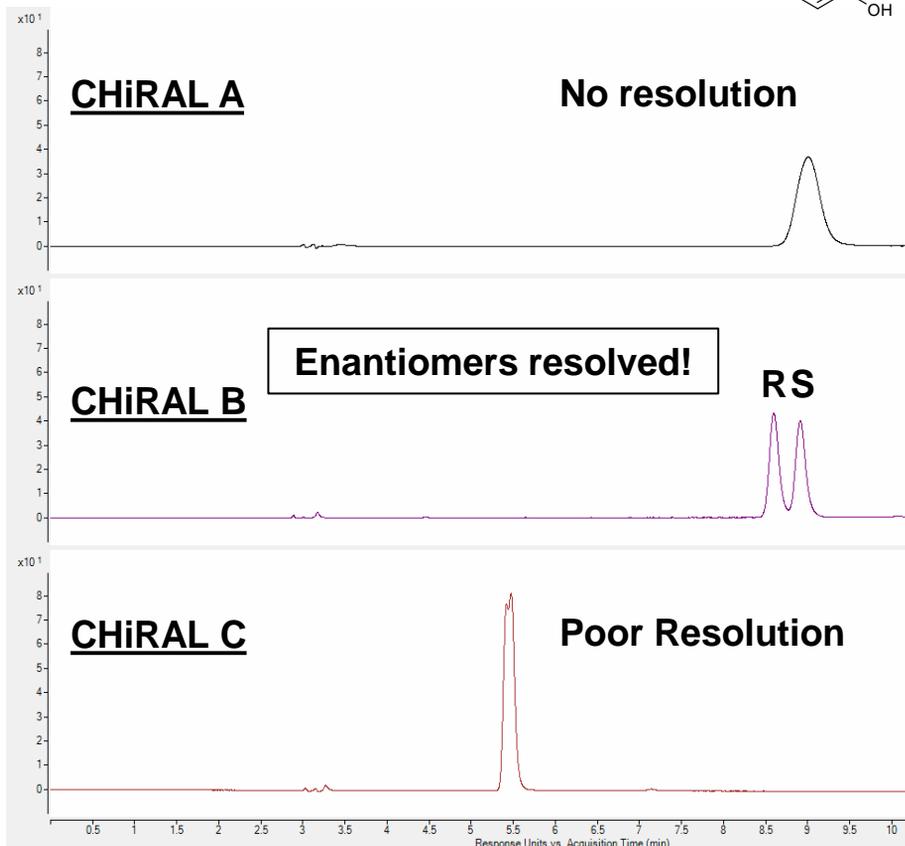
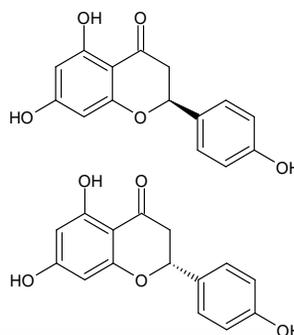


Figure 1: Analysis of racemic naringenin on columns with three different chiral stationary phases. Cosmosil CHiRAL B shows significant resolution of the enantiomers compared with CHiRAL A and C.