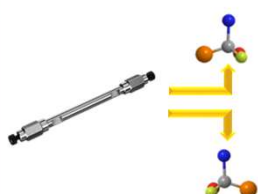


# Enantiomeric purity of new xanthone derivatives comprising two chiral moieties by liquid chromatography on (S,S)-WHELK-O1® column

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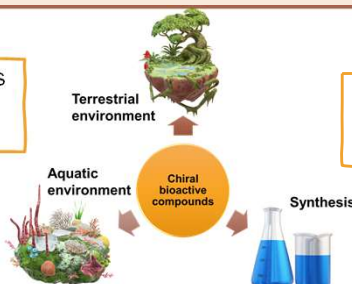
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## Introduction



Enantioseparation is essential in diverse research fields<sup>1,2,3</sup>.

Chiral bioactive compounds could be obtained from different sources<sup>4</sup>.



Enantiomeric purity of these compounds has influence in some properties:

Pharmacological effects

Pharmacokinetic properties

Toxicological effects

## Results and discussion

### Methodology

Analytes: chiral derivatives of xanthenes were previously synthesized in our group<sup>5</sup>

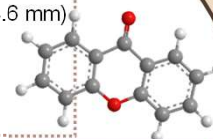
LC column: (S,S)-WHELK-O1® (Silica 5 µm, 100 Å, 250 x 4.6 mm)

Mobile phase: methanol:acetonitrile (50:50 v/v)

Flow rate: 0.2 mLmin<sup>-1</sup>

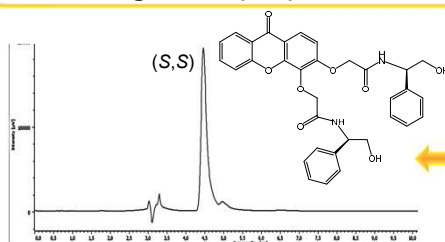
Temperature: 20 ± 2 °C

Detection: λ<sub>max</sub> = UV 245 nm

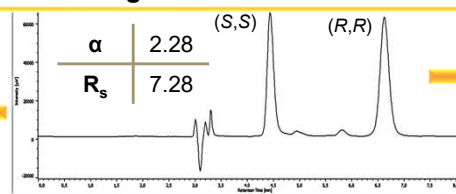


### Examples of LC chromatograms

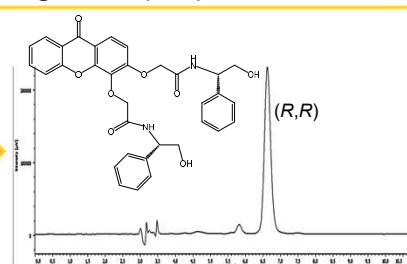
#### Chromatogram of (S,S) – enantiomer 1



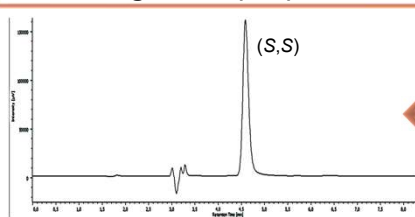
#### Chromatogram of enantiomeric mixture 1



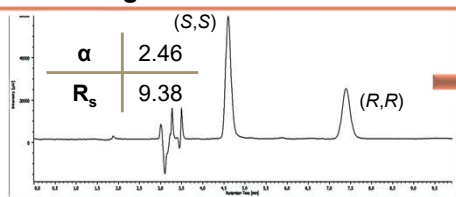
#### Chromatogram of (R,R) – enantiomer 1



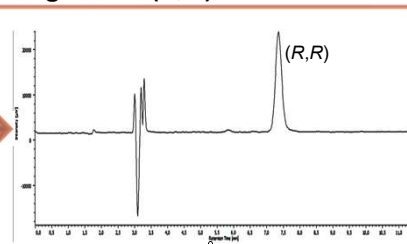
#### Chromatogram of (S,S) – enantiomer 2



#### Chromatogram of enantiomeric mixture 2



#### Chromatogram of (R,R) – enantiomer 2



Enantiomeric ratio (e.r) higher than 99% for all compounds.

## Conclusions

The enantioseparation of xanthone derivatives was successfully achieved on (S,S)-WHELK-O1® column in polar organic mode.

Excellent enantioselectivity and resolution were obtained for the tested analytes.

All compounds showed high enantiomeric purity with e.r. values higher than 99%.

## References

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