

## Accepted Manuscript

Title: Chromatographic enantioseparation of chiral sulfinamide derivatives on polysaccharide-based chiral stationary phases

Authors: Qingle Zeng, Quan Wen, Yao Xiang, Lei Zhang



PII: S0021-9673(18)30994-4  
DOI: <https://doi.org/10.1016/j.chroma.2018.08.010>  
Reference: CHROMA 359606

To appear in: *Journal of Chromatography A*

Received date: 21-2-2018  
Revised date: 30-7-2018  
Accepted date: 3-8-2018

Please cite this article as: Zeng Q, Wen Q, Xiang Y, Zhang L, Chromatographic enantioseparation of chiral sulfinamide derivatives on polysaccharide-based chiral stationary phases, *Journal of Chromatography A* (2018), <https://doi.org/10.1016/j.chroma.2018.08.010>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

# Chromatographic enantioseparation of chiral sulfinamide derivatives on polysaccharide-based chiral stationary phases

Qingle Zeng,\* Quan Wen, Yao Xiang, Lei Zhang

State Key Laboratory of Geohazard Prevention and Geoenvironment Protection (Chengdu University of Technology), Chengdu University of Technology, College of Materials, Chemistry & Chemical Engineering, 1#, Dongsanlu, Erxianqiao, Chengdu 610059, Sichuan, P. R. China. Email: [qinglezeng@hotmail.com](mailto:qinglezeng@hotmail.com)

## Highlights

- Enantioseparation of sulfinamides on polysaccharide chiral stationary phases is reported
- All of 12 sulfinamides can be resolved with three columns, eleven for both OD-H and AD-H
- A valuable guide for chiral HPLC study or technology related to chiral sulfinyl compounds

## Abstract

Chiral sulfinamides are increasingly recognized for their extensive potential applications in chemistry, medicine and material science, yet chromatographic study on these compounds is seldom. In this article, we describe the enantioseparation of twelve closely related chiral sulfinamide derivatives on polysaccharide-based chiral stationary phases (CSPs). We investigated the factors affecting separation, such as the types of chiral columns, the concentration of polar alcohol and the column temperature. The acyclic sulfinamide derivatives—with the exception of a cyclic sulfinamide compound—were effectively resolved with a Chiralcel OD-H column and a mixture of n-hexane:isopropyl alcohol (90:10) as the mobile phase. All compounds except N-benzylidene-2-methylpropane-2-sulfinamide are baseline resolved on the Chiralpak AD-H column, but only eight compounds are resolved on a Chiralpak AS-H column under the given chromatographic conditions. This study offers valuable guidance for future chiral HPLC studies related to chiral sulfinamides.

Keywords: HPLC, chiral sulfinamides, enantioseparation, chiral stationary phases, polysaccharides

## 1. Introduction

Chiral sulfinamide derivatives have a major role in chemistry, medicine, agricultural chemistry and materials science [1-2]. Commercially available enantiopure tert-butan sulfinamide is widely used as a reasonably priced chiral ammonia equivalent in the production of many versatile building blocks, [1-

Download English Version:

<https://daneshyari.com/en/article/10154477>

Download Persian Version:

<https://daneshyari.com/article/10154477>

[Daneshyari.com](https://daneshyari.com)