

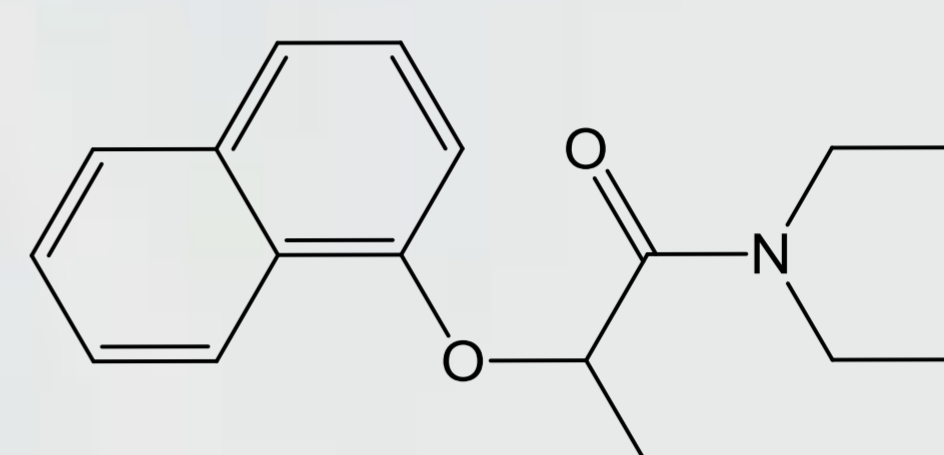


CHINA - RIGHT TIME RIGHT NOW



HPLC Procedure for Assay Determination of Napropamide and its *R*- & *S*-enantiomer

Napropamide is a selective systemic amide herbicide used to control a number of annual grasses and broad-leaved weeds.



Napropamide

Step 1:

External standard calibration technique is employed for quantitative determination of total enantiomers.

HPLC Condition:

Column, Zorbax® SB-PHENYL, 3.5µm, 4.6 mm i.d. x 150 mm,

Column Heater, set at 30 ° C,

Detector, Wavelength set at 290 nm, BW 8nm,

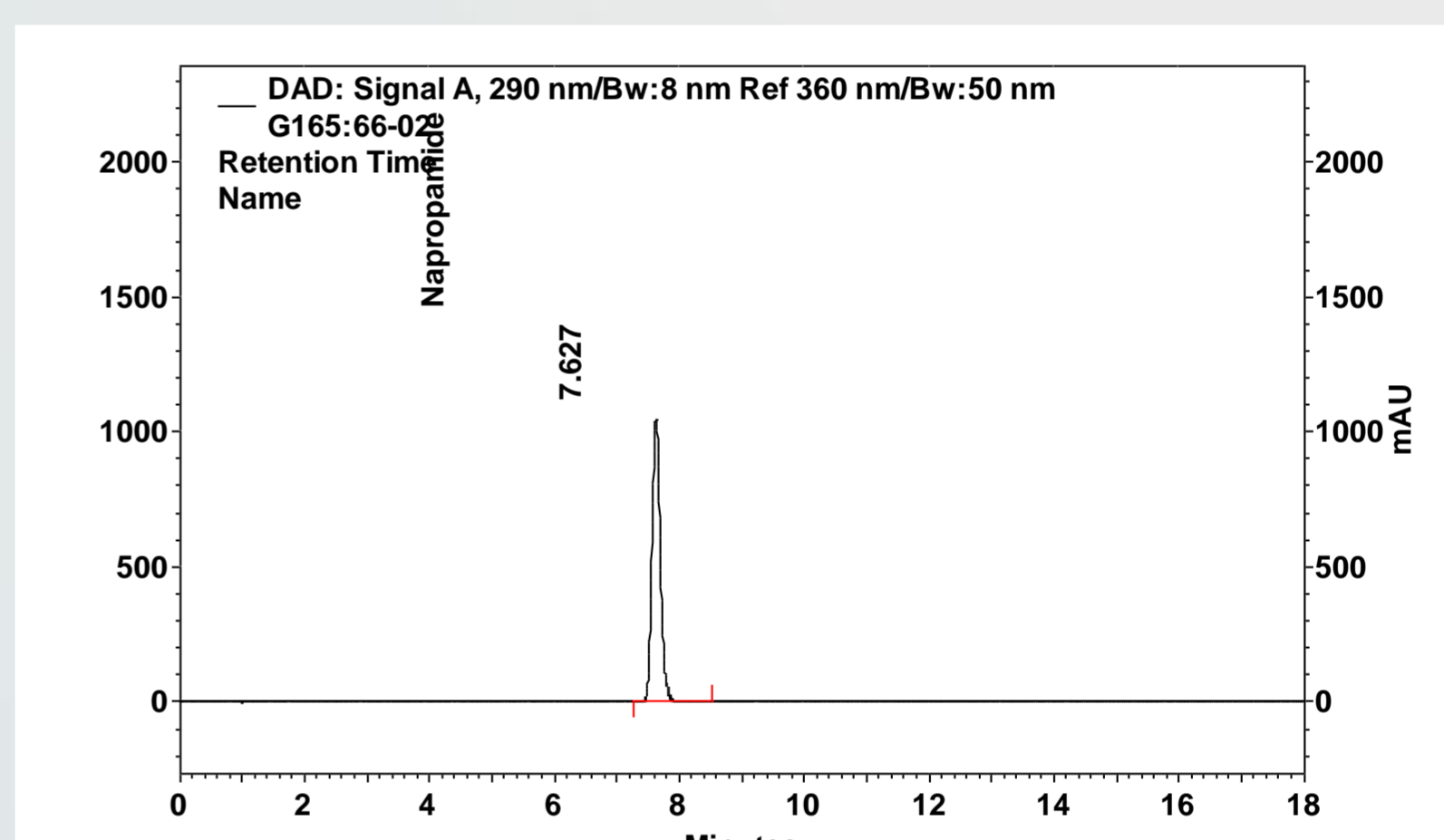
Mobile Phase, Acetonitrile / Water

Analytical Mode, Gradient Program

Time(min)	% Acetonitrile	% Water
0	42	58
10	42	58
10.5	100	0
13.5	100	0
14	42	58
18	42	58

Flow Rate, 1.5 ml/min

Injection Size, 5 µl



Step 2:

The *R*- & *S*-enantiomers are determined with chiral stationary phase isocratic HPLC mode with a Chiralpak® AY-H column.

HPLC Condition:

Column, Chiralpak® AY-H, 3.5µm, 4.6 mm i.d. x 250 mm,

Column Heater, set at 30 ° C,

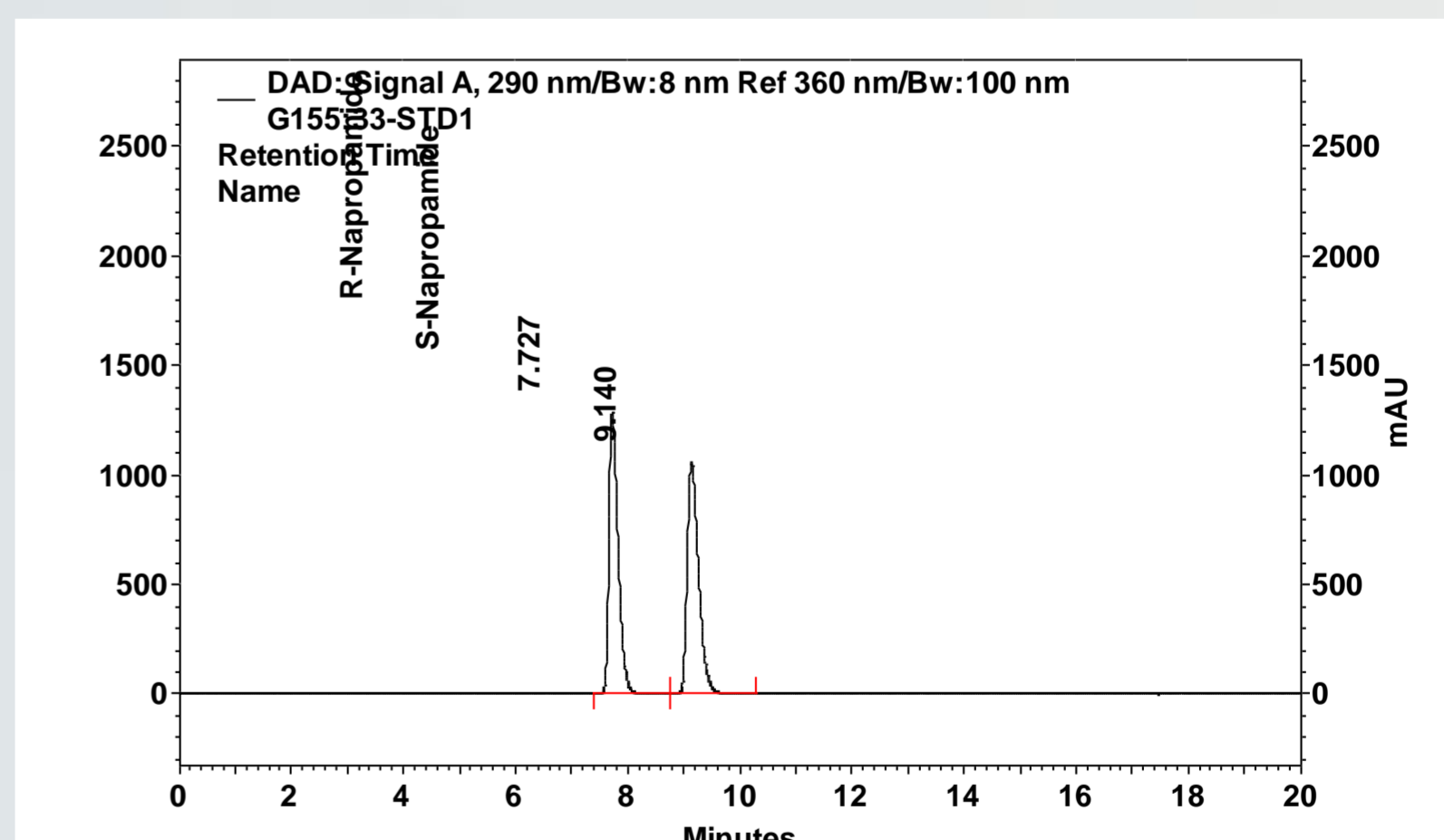
Detector, Wavelength set at 290 nm, BW 8nm,

Mobile Phase, Hexane/IPA/DEA = 90/10/0.1 (v/v/v)

Analytical Mode, Isocratic

Flow Rate, 1.0 ml/min

Injection Size, 5 µl



The wt% of *R*- and *S*- Napropamide in the sample is determined as follows:

$$R\text{-Napropamide wt\%} = \frac{T \times A_R}{(A_R + A_S)}$$

$$S\text{-Napropamide wt\%} = \frac{T \times A_S}{(A_R + A_S)}$$

Where,

T = Weight percent of total enantiomers in Napropamide technical

A_R = Peak area for *R*-enantiomer of Napropamide

A_S = Peak area for *S*-enantiomer of Napropamide