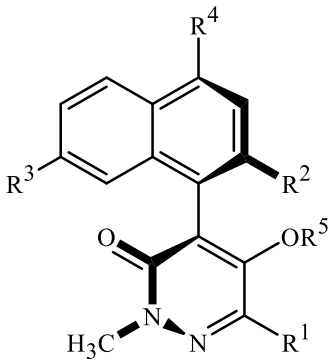
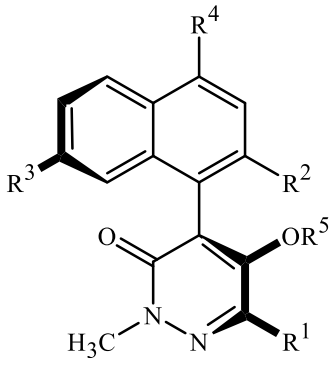
CLAIMS

1. An optically active compound selected from atropisomers of Formula **1a** and Formula **1b**



1a



1b

wherein

R^1 is Cl;

R^2 is CH_3;

R^3 is CH_3 or H;

R^4 is H; and

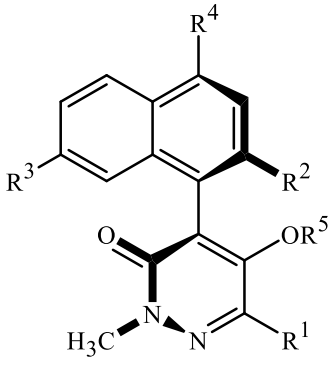
R^5 is H; and

wherein

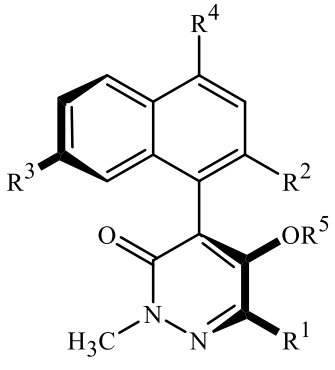
the atropisomer of Formula **1a** or **1b** has a plus (+) rotation value and is present in excess of its corresponding enantiomer.

2. The compound of Claim 1 which consists of the atropisomer of Formula **1a** or **1b** which has a plus (+) rotation value.

3. A process for preparing a compound of Formula **1a** or **1b**



1a



1b

wherein

R^1 is Cl;

R^2 is CH_3;

R^3 is CH_3 or H;

R^4 is H; and

R^5 is H;

the process comprising:

1) loading a racemic mixture of a compound of Formula 1 comprising the atropisomers of Formulae **1a** and **1b** onto a chiral supported supercritical fluid chromatography column and eluting with a mobile phase which comprises carbon dioxide;

2) isolating two separate fractions with different retention times; one containing an atropisomer with a positive optical rotation value $[\alpha]_1(+)$; and one atropisomer with a negative optical rotation value $[\alpha]_1(-)$.

4. A herbicidal composition comprising the compound of Claim 1 or Claim 2 and at least one component selected from the group consisting of surfactants, solid diluents, and liquid diluents.

5. A herbicidal composition comprising a compound of Claim 1 or Claim 2, at least one additional active ingredient selected from the group consisting of other herbicides and herbicide safeners, and at least one component selected from the group consisting of surfactants, solid diluents and liquid diluents.

6. A herbicidal mixture comprising (a) a compound of Claim 1 or Claim 2, and (b) at least one additional active ingredient.

7. A method for controlling the growth of undesired vegetation comprising contacting the vegetation or its environment with a herbicidally effective amount of a compound of Claim 1 or Claim 2.