



## CERTIFICATE OF ANALYSIS

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### 1. Identification

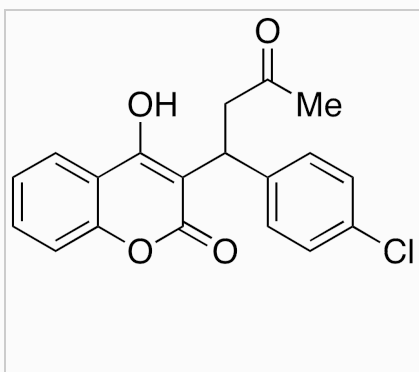
**Catalogue Number:** C745000

**CAS Number:** 81-82-3

**Product:** Coumachlor

**Synonym:** 3-[1-(4-Chlorophenyl)-3-oxobutyl]-4-hydroxy-2H-1-benzopyran-2-one; (+/-)-3-( $\alpha$ -Acetyl-p-chlorobenzyl)-4-hydroxycoumarin; (+/-)-Coumachlor; (+/-)-p-Chlorowarfarin; Coumachlor; Geigy Rodenticide Exp. 332; Tomorin; p-Chlorowarfarin;

**Structure:**



**Molecular Formula:**

C<sub>19</sub>H<sub>15</sub>ClO<sub>4</sub>

**Molecular weight:**

342.77

**Source of Product:**

N/A

**Solubility:**

Chloroform (Slightly),  
Methanol (Slightly)

**Lot Number:** 8-XJZ-157-1

**Purity:** 98%

**Shipping Condition:** This Product Is Stable To Be Shipped At Room Temperature

**Storage Condition:** 4°C

### 2. Warning

**Warning 1:** Toxic

**Warning 2:**

**Warning 3:**

### 3. Analytical Information

| Tests:             | Specifications:           | Results:                   |
|--------------------|---------------------------|----------------------------|
| Appearance         | White to Pale Beige Solid | White to Pale Beige Solid  |
| NMR                | Conforms to Structure     | Conforms                   |
| Elemental Analysis | Conforms                  | %C: 66.81, %H: 4.24        |
| MS                 | Conforms to Structure     | Conforms                   |
| Specific Rotation  | Report Result             | 0.0° (c = 0.2, Chloroform) |
| HPLC Purity        | >95%                      | 98.77% (205 nm)            |

**Additional Information:**

TLC Conditions: SiO<sub>2</sub>; Dichloromethane : Methanol = 9 : 1; Visualized with KMnO<sub>4</sub>; Single Spot, R<sub>f</sub> = 0.65. Elemental Analysis: (Theoretical) %C: 66.58, %H: 4.41

Purity is based on the analytical results of the tests performed. NMR and Elemental Analysis (if available) may have an accuracy of  $\pm$  2%. Isotopic purity is based on mass distribution observed. The contents of the specifications are subject to change without advance notice, and the specification values displayed here are the most up to date values.

### 4. Signatures

| Reviewed By   | Reviewed By   | C of A Approved By  | Test Date | Retest Date |
|---|---|---|-----------|-------------|
| Neha Khanna   | Eric Beaton   | My Nguyen   | 9/7/2019  | 9/5/2029    |
|  |  |  |           |             |