

# Aloin A Datasheet

4<sup>th</sup> Edition (Revised in July, 2016)

## [ Product Information ]

**Name:** Aloin A

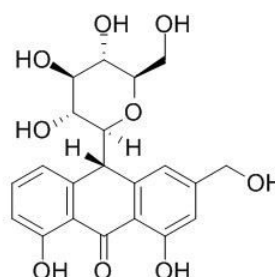
**Catalog No.:** CFN99943

**Cas No.:** 1415-73-2

**Purity:** >=98%

**M.F:** C<sub>21</sub>H<sub>22</sub>O<sub>9</sub>

**M.W:** 418.39



**Physical Description:** Yellow powder

**Synonyms:** Barbaloin; 1,8-Dihydroxy-10-(beta-D-glucopyranosyl)-3-(hydroxymethyl)-9(10H)-anthracenone; 10-beta-D-Glucopyranosyl-1,8-dihydroxy-3-(hydroxymethyl)-9(10H)-anthracenone; 10-Glucopyranosyl-1,8-dihydroxy-3-(hydroxymethyl)-9(10H)-anthracenone; (10R)-1,8-Dihydroxy-3-(hydroxymethyl)-10-[(2S,3S,4R,5R,6R)-3,4,5-trihydroxy-6-(hydroxymethyl)oxan-2-yl]-10H-anthracen-9-one; (1S)-1,5-anhydro-1-[(9R)-4,5-dihydroxy-2-(hydroxymethyl)-10-oxo-9,10-dihydroanthracen-9-yl]-D-glucitol; 1,5-Anhydro-1-[4,5-dihydroxy-2-(hydroxymethyl)-10-oxo-9,10-dihydroanthracen-9-yl]hexitol; 4,5-Dihydroxy-2-(hydroxymethyl)-10-oxo-9,10-dihydroanthracen-9-yl beta-D-glucopyranoside.

## [ Intended Use ]

1. Reference standards;
2. Pharmacological research;
3. Food research;
4. Cosmetic research;

5. Synthetic precursor compounds;
6. Intermediates & Fine Chemicals;
7. Others.

### **[ Source ]**

The herbs of *Aloe vera* L.

### **[ Biological Activity or Inhibitors ]**

Plants containing aloin A, aloe emodin, and structurally related anthraquinones have long been used as traditional medicines and in the formulation of retail products such as laxatives, dietary supplements, and cosmetics; however, topically applied aloe emodin increases the sensitivity of skin to UV light, although aloin A is not directly photocytotoxic, but human skin fibroblasts can metabolize aloin A to aloe emodin.<sup>[1]</sup>

Aloin A and aloe emodin have antibacterial activity against Gram-positive and Gram-negative bacteria.<sup>[2]</sup>

The extract of *A. vera* and its active ingredient aloin cause melanin aggregation leading to skin lightening via alpha adrenergic receptor stimulation, the result opens new vistas for the use of *A. vera* regarding its clinical application as a new nontoxic melanolytic agent for the treatment of hyperpigmentation. <sup>[3]</sup>

Dietary supplementation of aloe components (aloin, aloesin and aloe-gel) can ameliorate intestinal inflammatory responses in a 3% dextran sulfate sodium (DSS)-induced ulcerative colitis rat model, in particular, aloesin is the most potent inhibitor.<sup>[4]</sup>

### **[ Solvent ]**

Pyridine, Methanol, Ethanol, etc.

### **[ HPLC Method ]<sup>[5]</sup>**

Mobile phase: Methanol-H<sub>2</sub>O-0.1% Phosphoric acid=45:55:0.5;

Flow rate: 1.0 ml/min;

Column temperature: 25 °C;

The wave length of determination: 356 nm.

## **[ Storage ]**

2-8°C, Protected from air and light, refrigerate or freeze.

## **[ References ]**

- [1] Wamer W G, Vath P, Falvey D E. *Free Radical Bio. Med.*, 2003, 34(2):233-42.
- [2] Coopoosamy R M, Magwa M L. *Afr. J. Biotechnol.*, 2006, 5(11):1092-4.
- [3] Ali S A, Galgut J M, Choudhary R K. *Planta Med.*, 2012, 78(8):767-71.
- [4] Park M Y, Kwon H J, Sung M K. *Life Sci.*, 2011, 88(11-12):486-92.
- [5] Zhou J, Li X Y, Cheng S K, *et al.* *Chinese Journal of Pharmaceutical Analysis*, 2006, 26(1):130-1.

## **[ Contact ]**

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