



Europa Bioproducts Ltd

15-17 North Street • Wicken
Ely • Cambridge • CB7 5XW
Tel: 0044 (0)1353-721118
Fax: 0044 (0)1353-624589

ALC

Item#	Unit Size
A006-10	100 mg
A006-12	1 g

Chemical Name: 3-[N,N-Bis(carboxymethyl)aminomethyl]-1,2-dihydroxyanthraquinone

CAS: 3952-78-1

Application: F⁻ detection, colorimetric

Appearance: Yellowish orange or Yellowish brown powder

Absorbance (0.10 mmol/l, pH5.1): ≥0.420 (around 430 nm)

MW: 385.32, C₁₉H₁₅NO₈

Storage Condition: ambient temperature, protect from light

Shipping Condition: ambient temperature

Product Description

ALC is utilized for colorimetric detection of fluoride ion. A red solution of the La(III) or Ce(III) complex turns blue in the presence of fluoride ions. The maximum wavelength of the fluoride complex is 620 nm at pH 4-5. As little as 0.1 to 1 ppm of fluoride ion can be determined using this method. The structure of this complex has been reported as La₂L₂F₂, (La₅L₄F₂)_n or Ce₅L₄F₄ (L: ALC). ALC is insoluble in alcohol and ether, slightly soluble in water, and easily soluble in alkaline water. The fluoride complex can be extracted with iso-amylalcohol. Since ALC is less toxic than Alizarin red, it is used to mark and trace young fish. The aqueous solution of ALC is yellow at pH < 6, red at pH 6 - 10, and blue violet at pH > 11. ALC can also be used to detect aluminum ions. pKa₁(COOH) = 2.40, pKa₂(OH) = 5.54, pKa₃(NH⁺) = 10.07, pKa₄(OH) = 11.98 (m = 0.1).

Chemical Structure



CERTIFICATE NO. 3222

E-mail: info@europa-bioproducts.com

Web site: <http://www.europa-bioproducts.com>

Registered Office: 15-17 North Street, Wicken, Ely, Cambridgeshire CB7 5XW

Registered Number: 2703381