

SEMISYNTHETIC MODIFICATION OF ALPHA-AMYRIN, SECONDARY METABOLITE OBTAINED FROM THE RESIN OF *Cola nitida*.

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Abstract: The resin of *Cola nitida* tree has a high content in sugars, waxes and oils. 2 kg of this resin was collected in Cameroon and stored in dark pack. The sample was macerated in EtOH-CH₂Cl₂1:1 (v/v) for 7 days and the obtained the extract was dried in rotary evaporator. The crude extract was submitted to purification on vacuum liquid chromatography using silica (SiO₂) as stationary phase and the gradient of hexane-ethyl acetate (EtOAc) as the mobile phase. The collected fractions were pooled together according to TLC profile. Fractions obtained from the gradient hex-EtOAc (9:1) provided a white powder which was identified as alpha-amyrin by NMR spectroscopy. The compound was subjected to two different oxidation reactions using respectively PCC/SiO₂ and KMnO₄/Fe₂(SO₄)₃·6H₂O 2:1 [1]; Solvents: *t*-ButOH- CH₂Cl₂-H₂O 5:50:1). Both reactions were stirred at room temperature and monitored by TLC. The first one performed with PCC, was complete within 30 min and its product (A) was recovered by flash chromatography on SiO₂ (hex-EtOAc 9:1). The second reaction was stopped after 18 h, and extracted by partition with EtOAc-H₂O. The organic part obtained was purified by CC affording B. Their structures (A and B, fig 1) were also established based on the NMR data.

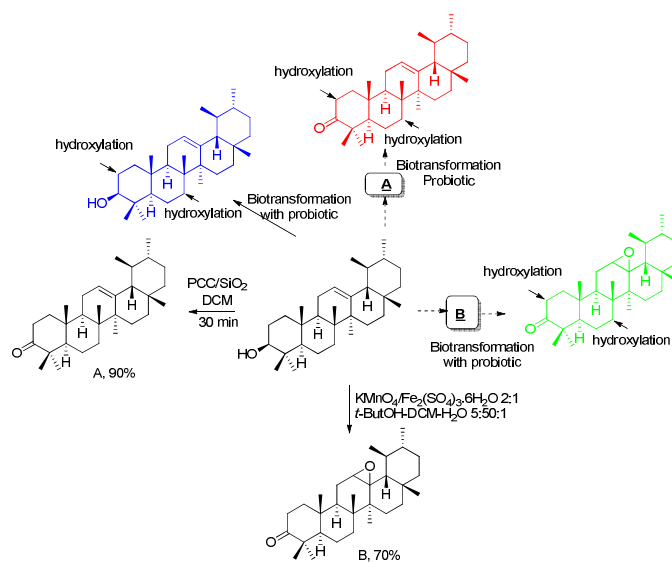


Fig:1 Compounds A and B obtained by oxidation and biotransformation of alpha-amyrin.

References:

[1] Salvador, Jorge AR., Melo, M Luisa Sá, Neves, AS Campos. 1996. Oxidations with Potassium Permanganate-Metal Sulphates and Nitrates. β -Selective Epoxidation of Δ^5 -Unsaturated Steroids. *Tetrahedron Lett* ; 37(5):687-690