



Figure. Structure determination of vatiparol. (ORD, optical rotatory dispersion; ECD, electronic circular dichroism)

CRUDE AND ETHANOL EXTRACTS OF PROPOLIS AS NATURAL GROWTH PROMOTERS (NGPS) IN MEAT POULTRY PRODUCTION

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This study was conducted to evaluate the effects of feeding different levels and sources of propolis substituted for Flavophospholipol as an antibiotic growth promoter on performance of broiler chickens in a completely randomized design. Five hundred and twenty days old broiler chicks (Ross 308) were divided into 40 experimental units of 13 chicks each. Each 4 groups were allocated to one of the ten dietary treatments, randomly. Dietary treatments were included control diet, diet containing 500 mg/kg of antibiotic Flavophospholipol, 4 diets containing different levels of 50, 100, 200 and 300 mg/kg ethanol extracts of propolis (EEP) and 4 diets containing 250, 500, 1000 and 2000 mg/kg of crude propolis. The Indices of performance were

evaluated for each treatment during the experimental period (0–42 d of age). The results showed that daily weight gain and feed conversion ratio had no significantly affected by different dietary levels and sources of propolis compared to chickens fed antibiotic Flavophospholipol. The highest averages of body weight at 42 d of age (2284 g) and feed intake in total experimental period (100.4 g/bird/d) assigned to chickens fed diet containing 100 mg/kg EEP. Totally, the results of this experiment showed that, similar to diet containing antibiotic growth promoter, feeding diets supplemented with 100 mg/kg EEP or 500 mg/kg crude propolis can improve performance of broiler chicks compared to control diet.

LIFE WITH LARCH — ISOLATED ARABINO GALACTANS AND THEIR IMMUNOLOGICAL ACTIVITIES

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The macromolecular larch arabinogalactan (LAG) is a highly branched polysaccharide consisting of a 1,3-linked galactan backbone with side-chains

of 1,6-linked galactose and arabinose residues (1). LAG is an excellent source of dietary fiber and has been approved as such by the US Food and Drug