RESEARCH ABSTRACT

SWINE HEALTH

Title: Determination of serum concentrations resulting from administration of high and low dose orally administered acetylsalicylic acid and sodium salicylate in swine through water medication systems – **NPB #04-034**

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II. Abstract:

The objective of this study was to determine plasma concentrations in swine following water administration of a sodium salicylate liquid aspirin product. Initially, the solubility of an acetylsalicylic acid and sodium salicylate liquid aspirin product was tested by measuring active ingredient levels over twenty- four hours with high pressure liquid chromatography (HPLC) analysis. Significant differences in acetylsalicyclic acid and sodium salicylate product solubility was confirmed. The sodium salicylate product was used for the remainder of the trial.

Four sets of three pens of pigs (average weight of 18.19 ± 2.75 kg) in a commercial production nursery facility received one of four treatments (stock solution concentrations: T1 = 19.4ppm, T2 = 38.9ppm, T3 = 77.6ppm, T4 = 155.3ppm, and T5 = 0ppm) for a period of 72 hours. Blood samples were taken at 0, 24, 60, and 72 hours. Serum salicylate levels were measured using HPLC. Serum concentrations of sodium salicylate (measured by HPLC) for each treatment group are reported. This study indicates that sodium salicylate, when given orally through a water-medication system, is absorbed, and reaches measurable concentrations in the blood.