

# Surveillance of selected antimicrobial residues in swine slaughtered in provincially inspected abattoirs in Alberta

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The prevalence of detectable drug residues in federally inspected Canadian slaughter swine is extremely low, approximately less than 0.1%. However, the occurrence of even one residue is a concern in today's market. No data exist on the prevalence of drug residues in sows, slaughter pigs or underweight (barbecue) pigs slaughtered at provincially inspected abattoirs. This study was designed to determine the prevalence of sulfonamide, tetracycline and beta-lactam residues in three classes of swine slaughtered at provincially inspected facilities in Alberta. Whole kidneys were collected from systematically selected pigs slaughtered at provincially inspected abattoirs over a three month period from October 1<sup>st</sup> to December 31<sup>st</sup>, 2001. Samples were randomly assigned to plants in proportion to the number of pigs in each class slaughtered at that facility.

Commercial CHARM radioimmunoassay test kits were used as a screening method. Suspect positives were confirmed and quantified by Liquid Chromatography/Mass Spectrometry (LC/MS). Of 791 samples analyzed, 764 (96.6%) were negative for sulfonamides. Of the 27 confirmed positives, 15 (1.9%) were above the Maximum Residue Limit (MRL) of 0.1 ppm allowed by Health Canada, while 12 (1.5%) were below the MRL. Four samples (0.5%) were suspect positive for beta-lactams. Confirmation of tetracycline screening is still in progress.

## **Implications:**

Drug residues in pork are still occurring at low levels. This study will assist producers in determining where residues are occurring and allow development of a surveillance program with a goal of zero prevalence.