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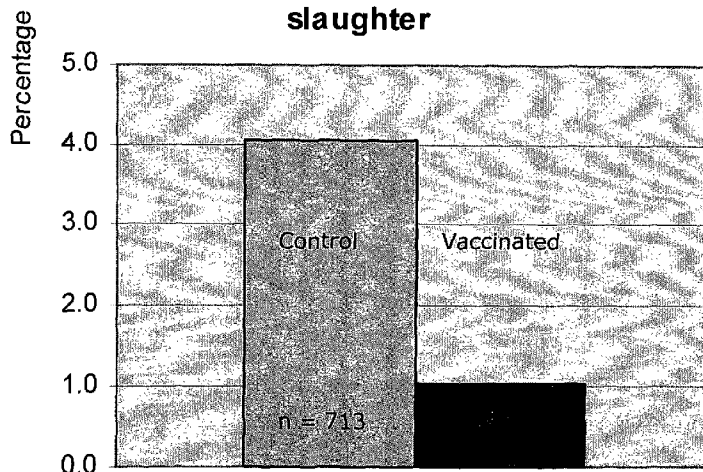
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(54) Title: VACCINE FORMULATIONS COMPRISING AN OIL-IN-WATER EMULSION

Percentages of PMWS cases in pigs up to slaughter



(57) Abstract: The present invention provides for an oil-in-water (O/W) emulsion, with increased stability in the presence of bacterial or viral suspensions, especially those concentrated and non-purified or weakly purified. The emulsion of the present invention can act as vehicle for the delivery of a pharmaceutical composition comprising at least one immunogen and, in particular, an immunogen selected from the group comprising an inactivated pathogen, an attenuated pathogen, a subunit, a recombinant expression vector, and a plasmid or combinations thereof. In one embodiment, the present invention provides for an injectable oil-in-water (O/W) emulsion comprising: (1) an aqueous solution containing an immunogen, said immunogen selected from the group comprising an inactivated *Mycoplasma hyopneumoniae* bacterium, an inactivated d porcine circovirus type 2 (PCV-2) virus or combinations thereof; (2) a mineral oil; (3) a non-ionic lipophilic surfactant; and (4) a non-ionic hydrophilic surfactant having a low HLB value which comprises ethoxylated fatty acid diesters of sorbitan (generally having HLB value between 11 and 13); (5) a non-ionic hydrophilic surfactant having a high HLB value between 13 and 40.

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