

Results of this experiment showed that the drug is released from such gel compositions in a sustained manner.

Quantity of the drug released from the respective compositions can be varied by selecting factors such as solubility of drug by proper selection of its salt or ester, drug loading in the composition, molecular weight of the copolymer or adding other polymer. The composition of the Example IV, containing tetracycline hydrochloride salt releases drug at a faster rate compared to the drug released from the composition of the Example V. This is due to the fact that the hydrochloride salt of tetracycline is about six times more soluble than the tetracycline base.

This series of experiments demonstrate that sustained release fluid gel or paste compositions of poly(lactyl-co-glycolide) can be formulated using propylene carbonate like pharmaceutically acceptable solvent of this invention without using any objectionable organic solvents such as acetone or methylene chloride for delivery of the drugs into the body cavities.

What is claimed:

1. A liquid, semi-solid or solid composition suitable for insertion into or around the periodontal pocket of a person or lower animal suffering from diseases of the oral cavity comprising a copolymer of lactide and glycolide in a concentration from about 10% to about 90% wherein the molar percentage centage of lactide units is from about 15% to about 85%, a active drug selected from the group consisting of antiinflammatory agents, antimicrobials, antibiotics, peroxides, anesthetic agents and vitamins in a concentration from about 1% to about 90% and propylene carbonate in a concentra-

tion from about 0.1% to about 90%, the ratio of the components being such that the drug active is released at a rate to provide steady state number average concentrations of from about 10 micrograms to about 2000 micrograms per milliliter of the gingival crevicular fluid of a treated periodontal pocket.

2. A composition according to claim 1 wherein the number average molecular weight of the copolymer is from about 1000 to about 120,000.

3. A composition according to claim 2 wherein the concentration of the active drug drug active is from about 10% to about 50% and the active is selected from the tetracycline group of antibiotics.

4. A composition according to claim 3 wherein the composition is formed into a semi solid or solid shape having a width of from about 0.1 mm to about 5 mm, a thickness of from about 0.01 mm to about 2 mm and a length of from about 1 mm to about 15 mm.

5. A method of treating diseases of the oral cavity in a person or lower animal suffering from such disease by placing into the periodontal pocket or around said pocket of said person or lower animal a composition according to claim 1.

6. A method according to claim 5 wherein the active drug active is selected from the tetracycline group of antibiotics.

7. A method according to claim 6 wherein the composition is formed into a shape having a semi solid or solid width of from about 0.1 mm to about 5 mm, a thickness of from about 0.01 mm to about 2 mm and a length of from about 1 mm to about 15 mm.

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