

VEHICLES FOR ROOT CANAL MEDICAMENTS

Vehicle, any substance that acts as the medium in which a drug is administered, also known as drug carriers that control the drug release. It can prolong the duration of drug release or can release on specific targeted sites.

Ideal vehicles must possess properties-

- ❖ Biocompatibility
- ❖ Easy dentinal penetration
- ❖ Promote disinfection
- ❖ Minimizing toxicity & irritation to periapical tissues.

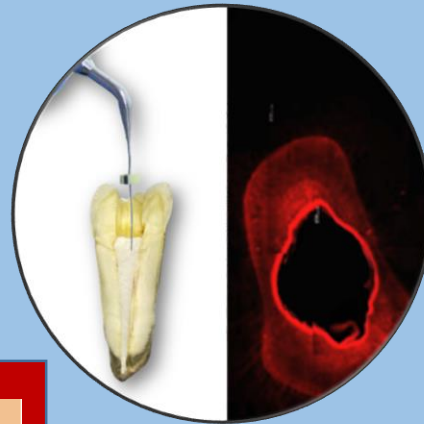


Table 1: Bactericidal activity of vehicles against ATCC strains of *Str. mutans*, *Sta. aureus*, *En. faecalis* and *Es. coli*

Vehicles	<i>Str. mutans</i> (%)	<i>Sta. aureus</i> (%)	<i>En. faecalis</i> (%)	<i>Es. coli</i> (%)
PG	50	100	25	50
Glycerine	100	100	100	100
PEG 400	100	100	100	100
PEG 1000	25	100	100	25
PG+PEG 400	100	100	100	100

PEG=Polyethylene glycol, PG=Propylene glycol

TYPES OF VEHICLES

Aqueous vehicles

- Saline
- Methylcellulose
- Ringers lactate
- anaesthesia



SALINE



ANESTHESIA



RINGER SOLUTION

Viscous Vehicles

- Glycerin
- Polyethylene glycol
- Propylene glycol



Metapaste



GLYCERIN



POLYETHYLENE GLYCOL

Oily vehicles

- Oleic acid
- Camphorated monochlorophenol (CMCP)
- Linoleic acid



Metapex



CAMPHOR



OLEIC ACID



CHITOSAN

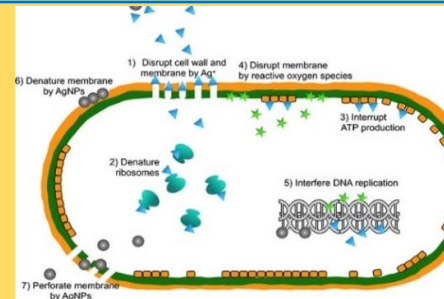
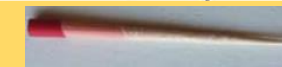
Calcium hydroxide paste delivery



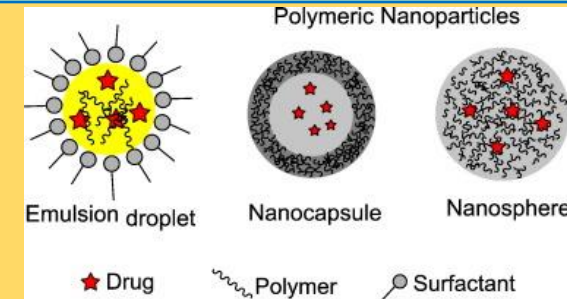
With Jet dispenser



With Direct syringe



AgNPs' bacterial inhibitory activity



CHLORHEXIDINE