

## Development and characterization of chitosan-coated nanoemulsions

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### ABSTRACT

The design of modified drug release systems is performed aiming the increase of drug concentration at the site of action or absorption, reduce the dose and frequency of administration and variations in plasma levels (DHAWAN et. al, 2004). Among these systems oral nanocarriers intended for oral use are of particular interest for the treatment of chronic degenerative diseases such as cancer (Khafagy et. al, 2007). Oil/water nanoemulsions (NE) were developed and characterized for incorporation of hydrophobic and chitosan-coated chemotherapeutic agents (Q) to confer mucoadhesiveness, protection against premature degradation and increased cell permeability. The NE presented average diameter of 118.3 to 160.4 nm and PDI in the range of 0.13 to 0.20. Due to the presence of soy lecithin the zeta potential was negative between -23.48 and -33.57. After coating with different Q proportions, there was an increase in diameter (>50 nm) and zeta potential inversion, indicating the nanocarriers coating.

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