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A Review of the Physical and Chemical Properties of Human Semen and the Formulation of a Semen Simulant

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A fluid medium was developed to simulate the salient physical and chemical properties of human semen. The composition of the medium was based upon an extensive review of the literature on constituents of human semen. In choosing the ingredients for this medium, the goal was to emphasize properties that influence interactions of human semen with topical contraceptive, prophylactic, or therapeutic products. Among these properties, pH and buffering capacity, osmolarity, ionic strength, and rheological properties play dominant roles in the physico-chemical processes that govern drug release kinetics and delivery vehicle distribution.

Key words: Composition, human, semen, simulant, microbicide

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