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## Preparation of $\Delta^9$ -tetrahydrocannabinol for intravenous injection

Fenimore & Loy (1971) and Moreton & Davis (1972) have described the preparation of  $\Delta^9$ -tetrahydrocannabinol ( $\Delta^9$ -THC) suspensions. Perez-Reyes, Timmons & others (1972) have described an infusion based on human serum albumin. We now wish to report a formula for a clear, intravenous saline solution of  $\Delta^9$ -THC and related cannabinoids, which can be injected in a relatively small volume.

The formulation consists of  $\Delta^9$ -THC, 0.1% w/v; alcohol USP, 5% v/v; Emulphor EL-620 0.6 v/v (or Tween 80, 1.5% v/v); saline q.s. The  $\Delta^9$ -THC is prepared as a 2% w/v solution in ethanol to facilitate handling and measurement. The surfactant is added next with mixing and finally the saline solution is added slowly with gentle mixing to final volume.

The above preparation can easily be sterilized by use of a 0.22  $\mu$ m filter. The preparation is infinitely dilutable in water without visual precipitation and gives the appearance of a clear solution. Negligible haemolysis was observed in saline solution. The concentration of 1 mg  $\Delta^9$ -THC ml<sup>-1</sup> of saline solution is practical for use in man (injection range 1-5 ml of saline).

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