

in this way as indicating dissociation between analgesia and respiratory depression relies on the two drugs having log dose response curves which are identical with respect to slope and maximum. We were unable to confirm that morphine and 218-M share these characteristics in the mouse.

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An improved method of filtration in the determination of morphine by precipitation with fluorodinitrobenzene

In the high ambient temperatures (70–90° F) frequently encountered during the Australian summer, the method for the determination of morphine described by Garratt, Johnson & Lloyd (1957) and Garratt (1964), in which the dinitrophenyl ether is precipitated with 1-fluoro-2,4-dinitrobenzene, is difficult to carry out because of the increased solubility of the precipitate as the solution warms up during filtration. The transference of the precipitate to the filter crucible is made more difficult by the loss of liquid through evaporation.

To overcome these difficulties, the precipitation of the dinitrophenylether is effected in a pear-shaped flask (Quickfit & Quartz FP 50/1) maintained at 60° F in a constant-temperature water bath. When precipitation is complete, the supernatant liquid is drawn off by vacuum through an Emich filter stick with a porosity 3 sintered glass disc and the flask and precipitate are then washed with 4 × 2 ml portions of acetone cooled to 60° F.

In this way precipitation and filtration are carried out at 60° F and there is no troublesome transference of precipitate to the filter. The use of a pear-shaped flask facilitates washing of the precipitate since there is little dead volume, but it is necessary to dry the flask with the filter and precipitate in a vacuum oven to remove all traces of acetone.

The Emich filter stick is made by fusing a porosity 3 sintered glass disc (8 mm diameter × 2 mm thick) to the flared end of a Pyrex tube (1.5 mm i.d. and 4 mm o.d.), the overall length being approximately 14 cm.

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